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Anniversary Issue

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Yearbook

DECEMBER
1949

Industry

•

Economics

•

Science

•

Legislation

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Vessels

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Canneries

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News

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Features

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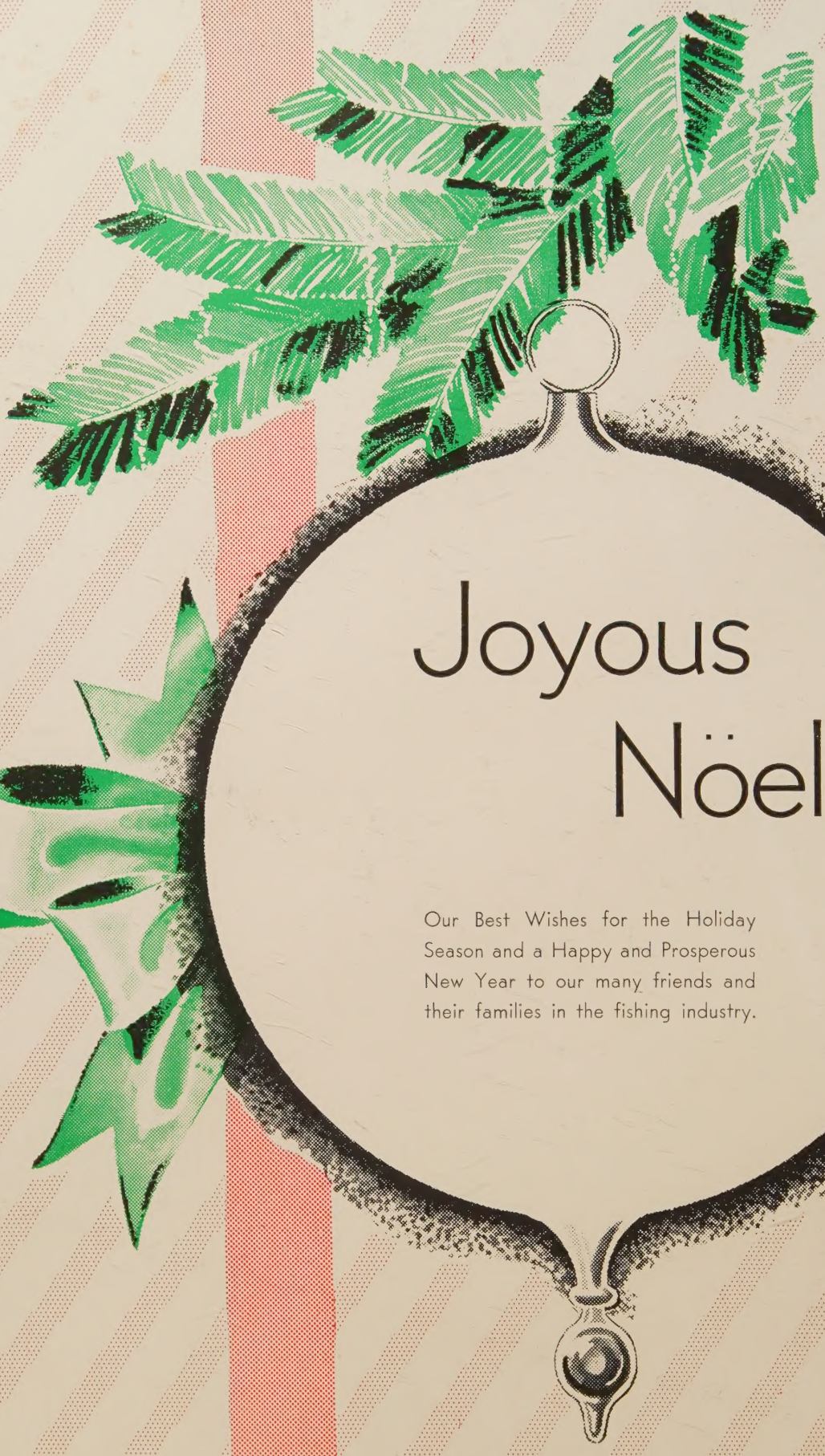
Silhouettes

PAN-AMERICAN fisherman

5 CENTS



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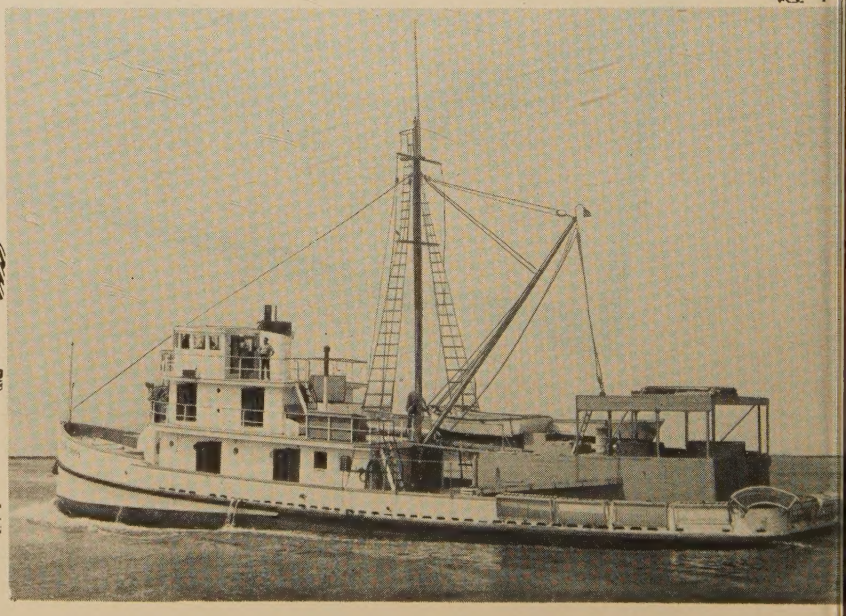

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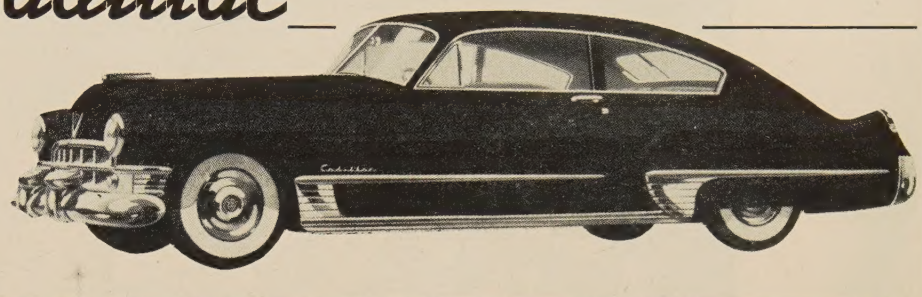

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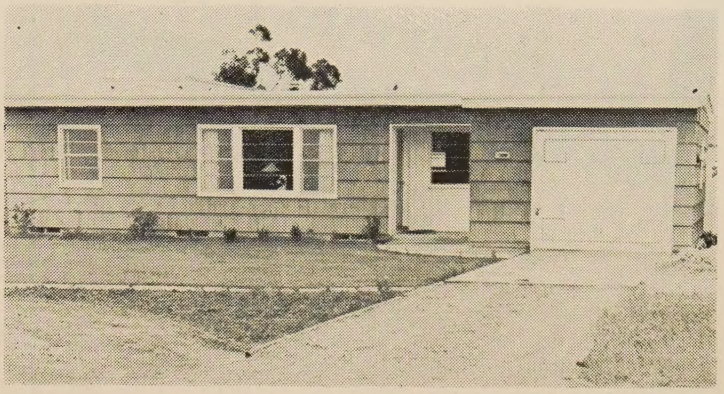

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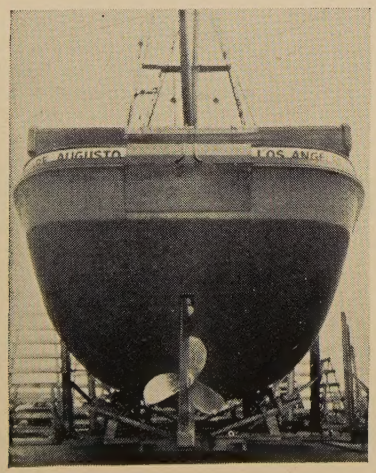

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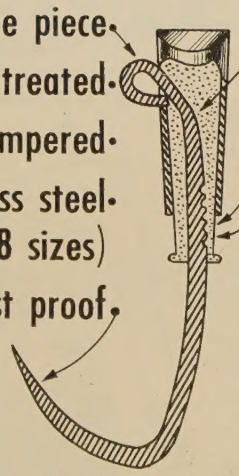

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PAN-AMERICAN *fisherman*

NEWSmagazine of PAN-AMERICAN FISHERIES combined with the magazine TUNAfisherman

MAIN OFFICE
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San Diego, Calif — Phone F-7876

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Serving the Pan-American Fisheries

A Marine Press Publication

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Volume 4 Number 6

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ABOUT THIS ISSUE:

ON November 8th we asked Marine Press Contributing Editor Robert K. Lawson to write between 15,000 and 20,000 words covering the Southern California Fishing Industry to appear in this Yearbook & Bibliography of *Pan-American Fisherman Magazine*, and before the end of November "Bob" had turned in 21,700 words on the subject. What he has written speaks for itself; but it occurs to use to mention the fact that there was sound reasoning behind our selection of "Bob," from among our ten Contributing Editors, to do the job. There is a rare dearth of factual information in the copy that flows across an editor's desk; notably due to many writer's lack of familiarity with their subject. In "Bob" we have that unusual combination of an experienced writer —who has also been a fisherman. It was in 1946, in September, that "Bob" signed on as assistant engineer with the tuna boat *Sea Wolf* for a trip to southern fishing waters in the interests of a story. But nobody aboard the *Sea Wolf* knew about the story. And Manuel Chagas, the skipper, hired him on a one-quarter share basis in the role of an inexperienced fisherman.

They were gone 39 days, and the boat returned with 51 tons of fish. "Bob" proudly claims that he caught one skipjack. His one-quarter share paid off $114, after tax deductions. The skipper offered him a one-half share the next trip, but "Bob" was forced to admit the hoax, that he was no fisherman despite the skipper's faith. He thinks today that the only reason Manuel offered him a one-half share was because of his knowledge of diesel engines. His high regard for the members of the *Sea Wolf* crew at that time speaks well for the fact that he must have demonstrated some fishing ability. His recollections of hauling nets for bait, throwing the lead line, working on the engines, standing the engine watch, and sometimes the wheel watch are all pretty vivid to this day. He was born in Waseca, Minnesota, September 24, 1908, where his father was postmaster. The family, including his father, mother, two brothers and one sister, later moved to Elmira, New York, where his father was chief engineer of the Field Force Pump Company. It was there that the lust for learning and education paled for young Lawson, and the thoughts of musty classrooms came to grips with dreams of free-blown winds of distant places. He says that he is not entirely clear today just how the maneuver was completed, exactly; but he passed through Ithaca, missing the familiar turn that would have delivered him to Cornell University, and arrived in New York City without a backward glance at the old school.

It was October in New York; and he was 19. It took just a month to assure himself that the big city held nothing of further interest, and by mid-November he was aboard a ship for Panama. A short stay in Colon was chiefly comprised of bouts with Costa Rican rum, and resultant headaches. Soon a boat left for San Francisco. But the call for other lands came again, and he wound up in Honolulu the next year. Along the way he had been able to sell a few stories for practically peanuts, to what he now considers were extremely gullible editors. He spent nearly three years there, and made frequent trips to the other islands of the group aboard the little inter-island steamer Haleiakala. Meanwhile article and story sales had increased, and it was from there that he sold his first fiction piece to a major slick magazine. At that time Liberty paid $500 for an 1,800 word short short story. He has never been able to crack that market since then. Returning to the United States in November of 1930, he confronted the depression head-on, and lost. The next few years held a whirlwind of jobs gained and lost; some good, some bad, until he arrived in San Diego, California, and began writing seriously.

—*John Springer*

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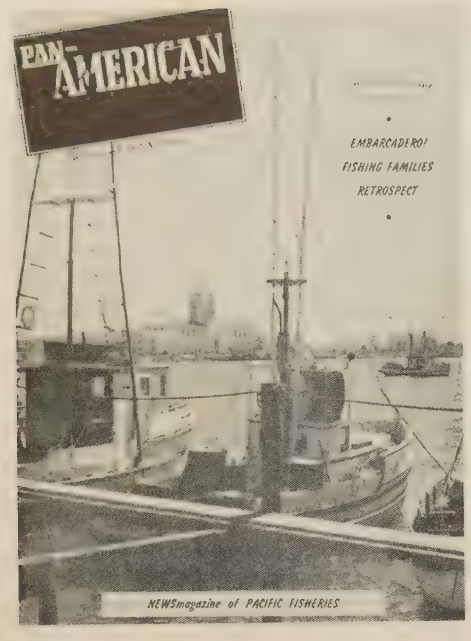
RETROSPECT

In this building, which has as its back door the endless reaches of the Pacific ocean, the magazine *Pan-American Fisherman,* is produced each month. The structure is known as Broadway Pier Building, and it was chosen as the subject for the publication's cover for December, 1949. During that month the site underwent a complete paint and partial remodeling job. Cover photos for the months following have been sprinkled throughout the succeeding pages, in order to lend emphasis, and perhaps to jog memories, of the year's events.



JANUARY 1949

INDUSTRY

Abalone, Halfhill, and Millions

THE story of the Southern California Fishing Industry and the multi-million dollar investment that it represents today is a thousand tales, spun for 80 recorded years and along 10,000 miles of tumultuous, wave-tossed sea lanes. It is the anthology of an ocean that is a foreign pawn and a fishermen's challenge; the turbulent record of man against man, and man against nature's strongest elements; the chronicle of the sailor roving dark seas with sail and inadequate navigation and the dreams of better ships and equipment to come; and the safer annals of the men in the cities ashore, their dreams of different things, visions of canneries and production and markets.

And all these tales are welded by one strong thread, the production of a food that today supplies one-tenth of the nation's annual consumption, and gives a significant identity to the men who made possible this gigantic enterprise. But the epic of the huge tuna packing industry of the South, and the sardines of the Central Coast are antedated by a similar industry lost, today, through a fatal mistake. Long years following the fate of the abalone, the fishing industry is keynoted by milestones calculated to warn and to forestall a recurrence of that nature to the species that now constitute the bread and butter of the Southern California fishing fleet.

While the abalone had been prized highly for many centuries by the coastal inhabitants of China, Japan and the neighboring islands, as well as the people of Africa, France, and the Channel Islands, both for its food value and the usefulness of their brightly-colored shells; it was not until around 1870, with the arrival of the early Chinese immigrants to the United States, that abalone fishing was introduced in this country. In a comparatively short time, these husky and industrious fishermen had built a thriving business. And by 1879, the industry was estimated at a worth of $127,000 from the exportation to their native country of dried and smoked abalone meat, and the equally valuable shells.

Early fishing, curing and packing methods employed by the Chinese were simple and effective, required little investment, and utilized many of nature's elements in their accomplishment. The Chinese diver needed little equipment, but a sharp heavy-bladed knife to pry the abalone from its perch on the deep under-water rocks. When the abalone was brought ashore, the same knife served the purpose of removing the meat from the shell. With this done, the shells were set in the sun to dry, and the meat was soaked in brine to aid in preserving it. It was then washed and cooked in salt water for one half hour, before being placed on drying frames in the sun for five days. Following the initial drying period, the meat was again cooked in salt water, this time for one hour; then smoked in charcoal smoke for twenty-four hours, before being returned to the drying racks for a period of six weeks. Upon completion of this final curing phase, the meat was rinsed in warm water. Ready for shipment, it was brown, hard and tough; but could be cut, similar to dried beef, with a sharp knife, or ground into powder for making soups. The shells were prepared for shipment by rela-

tively simple means, being scraped with the knife to assure the removal of all portions of meat, then polished to a bright luster by rubbing with sand.

IT was not, however, until 1905 that the Americans recognized fully the tremendous potential in the use of the abalone. And in that year, the commercial fishing and canning of the specie was begun at Cayacos, California. Business was excellent from the start, for two reasons: Foreign demand for the canned abalone meat; and equally great demand, both at home and abroad for the shells, then considered of much value as "mother-of-pearl" for the manufacture of household novelties, jewelry, and buttons.

Simultaneously, similar operations were started at Monterey, and at various other points along the West Coast, and the diving for abalone became big business over night. A shortage of abalone developed before long, however, and operations were expanded to Santa Catalina Island, where, near Avalon, it was found the abalone were abundant and grew to greater sizes than along the mainland coast. It was at about this time that the United States Conservation Department stepped into the picture and took an active notice of the abalone industry.

But neither the fishermen, themselves, nor the Conservation Department recognized soon enough the pitfalls that lay ahead. Controls had been established around 1900 setting the limit at 15 inches, and reduced to 12 inches in 1905. In 1909 the limit-size was raised to 17 inches. But it was not until 1911 that sufficiently drastic controls governing size, and closed seasons, were enacted and enforced. The proper controls came too late—the abalone devastation was completed in 40 years—and the industry was ruined.

Meanwhile other species of fish were being exploited by Southern California fishermen. They were, chiefly, sardines. And it was in 1892 that A. P. Halfhill, a former grocery salesman and member of the wholesale grocery firm of Patterson, Halfhill and Zimmerman in Mankato, Minnesota, came to California and established the Cal Fish Company in East San Pedro. Halfhill was described as a burly Minnesotan with a cow-catcher mustache, and credited with being "a damned good salesman." In any event he built a thriving business in the processing and packing of sardines until 1903, when the sardines disappeared from the California coastal waters with the alarming suddenness that has characterized this specie in subsequent years.

Left flat, with no fish to pack, Halfhill cast about for another specie of fish that would keep his business alive. Halfhill was his own salesman, and in the course of his travels about the country, he came upon a tin of Italian Tunny. A great light dawned. He returned immediately to San Pedro and informed his associates, "we must find something like this to pack." From that happenstance, the Southern California Tuna Industry was born; and A. P. Halfhill is generally credited with being the father.

Inception

The roaring Port of Los Angeles, where, according to authoritative sources, Southern California's commercial fishing got its start.

Tuna Capital

Port of San Diego, California, home of the sprawling tuna industry.

Cal Fish had been experimenting with rock cod, albacore, and halibut during the interim following the exodus of the sardine; but these species, hitherto caught merely for sport, had not been accepted by the marketing public. And to, albacore was then considered unsuitable for food, and described as the "hog of the sea," due to its preponderance of blood. Through an experiment, however, Halfhill discovered that live steam turned the albacore meat a snow white, and that in this state it resembled the meat of chicken in both taste and appearance.

Halfhill's first albacore pack in 1903 amounted to 700 cases in three-quarter-pound tins. He was then confronted with the near gigantic task of introducing this new product to an almost totally indifferent buying public. It was at this point, according to C. P. and H. V. Halfhill (Halfhill's sons) in their "Birth of a Mighty Industry," that Halfhill proved his salesmanship. It came about with a meeting between the elder Halfhill and Seeman Brothers wholesale grocers in New York City, when Halfhill opened his sample can of albacore.

Seeman said, "What is this?"

"What do you think it is?"

"I do not know what it is, but it looks like chicken."

"It is," replied Halfhill, "chicken of the sea."

According to legend, the term "Chicken of the Sea," was born of that meeting. And A. P. Halfhill slugged half his pack into the eastern markets; and, by virtue of intelligent placement among selected grocers, created a suitable price structure. At the same time, the balance of his pack went to Los Angeles, and local markets, where it met with considerable indifference. However, the tuna unloaded in the east met with a good reception, and was gobbled up with remarkable gusto. The demand had been established.

ODDLY enough, Halfhill's pack of rock cod and halibut, both well known products, didn't sell as fast as the albacore. In 1904 he packed 1,400 cases of albacore. The pack increased to 2,500 cases the following year, and in 1906 was increased to 3,000 cases. The Los Angeles market woke up. And that year the first carload of albacore ever shipped from Southern California was dispatched to Seeman Brothers in New York. Halfhill's success was noted by others, and competition developed almost over night. By 1913 nine canneries were packing 115,000 cases of albacore annually. Before the end of 1917 the Southern California industry had increased to 36 canneries located at four points along the coast bordering San Diego, Long Beach, Wilmington, and San Pedro and the pack had jumped to a grand total of 1,196,510 cases of albacore and yellowfin tuna combined. Thirty years later, the industry packed 7,512,827 cases of tuna and tuna-like fishes. The price per ton paid to fishermen in 1917 was $30 for albacore, and $50 for yellowfin tuna. In 1947 the price had climbed to $410-600 for albacore, and to $310-340 for tuna. There was little change in the price in 1949, but the estimated pack of the industry is expected to exceed 9,000,000 cases.

The sardine industry had moved slowly up the ladder, with the return of this species to Southern California coastal waters, and had gained a considerable foothold. Sardines had long been accepted by the buying public, but the majority of these purchases included imported sardines packed in oil, and the domestic industry was confronted with not a small problem of creating a pack that would provide competition with the foreign imports of a product established and in demand by the public. Pioneering in that field was Martin J. Bogdanovich, a quiet, even-tempered individual from the island of Camiza, in Yugoslavia, who had migrated to the United States in 1915.

Bogdanovich found breaking into the clannish fishing fleet a difficult problem. But he was a fisherman, and he knew what he wanted to do. Wages were low, and jobs were scarce; but somehow he managed to eke out a living in those early days, and eventually was able to save enough money to buy a small fishing boat. One day, he lost some of his catch, as a result of spoilage. Quick to correct this oversight, he loaded ice aboard the next trip and is credited with being the first West Coast fisherman to adopt the icing of fish at

Leader

Wade Ambrose, President Westgate Sea Products Company, San Diego, California.

sea. Other boat owners followed suit, and the practice became general throughout the fleet. With this method Bogdanovich was able to cash in 100 per cent on his loads, and subsequently lay up a little capital.

He was dissatisfied, however, and a restless, ambitious, and prodigious worker. He decided to set up his own cannery. With a group of partners, a small cannery was built and operation begun in the packing of sardines after the manner of the imported product—in oil. Competition was keen, and the road was rough. Each of his partners fell by the wayside during the next ten years, and Bogdanovich bought each individual out. The ten years were rugged going for Bogdanovich; but by 1927 he had become sole owner of the enterprise, that is known today as the French Sardine Company of Terminal Island. The name being evolved from the "oil pack" of the imported products, which were, at the time, French.

Vessels and equipment grew with the industry, but were slower in keeping pace, and in most instances resulted more from necessity than a direct aim for improvement. It is a strange characteristic of the men of the fishing industry that they are slow to make a change, or to recognize new methods; preferring to cling to tried and proven patterns handed down through the years. Such was the case with the fish nets used for taking sardines in the early days of that industry. Men of the industry fought tooth and nail to prohibit the use of the lampara nets, until a demonstration had proven beyond the shadow of doubt the greater utility and higher efficiency that could be obtained. Early canning methods involving cutting the fish by hand, cooking them in wire baskets, which were dragged through tubs of oil by hand, packing by hand, and soldering the cans by hand, were slow to change; and, in fact, remained with the industry until about 1911. The high-pressure steam retorts, mechanical soldering machines, conveyor belts, and labeling machines, came slowly to the packing industry.

And so it was until it became necessary to travel into more distant waters in the search for tuna that newer long-range tuna clippers came into being. They grew slowly, one foot at a time, in length, and correspondingly the hold tonnage expanded. Navigational aid, with the exception of charts and a compass, received little consideration. And today, the big clippers of the tuna fleet rely upon dead-reckoning to navigate their ships over thousands of miles of the eastern South Pacific waters. Most vessels carry a sextant aboard; but it is seldom used. Depth sounding devices, and automatic pilots, both valuable aids in fishing came slowly. Radio was early considered simply for a safety factor, and today little concern is shown on a tuna clipper if the radio gets out of order. The bamboo fish poles, and the squid, both developed and used by the Japanese fishermen for centuries are still in use for the fishing of tuna today. Several recent efforts have been made to introduce a mechanical fish pole, but the reception to this device has been cool. But men of the fishing fleet are waking up. And the past two years have seen the airplane and the helicopter added to the big clippers, to aid in the search for both bait fish, and the schools of tuna.

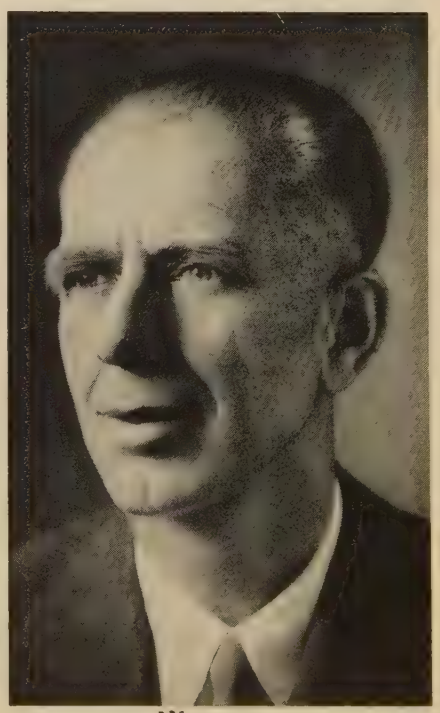
Pioneer

Earl Nielson, General Manager, High Seas Tuna Packing Company.

TODAY, the huge multi-million dollar Southern California Fishing Industry passes in review along the following pages in this Yearbook and Bibliography of Pan American Magazine, in a salute to this great industry and the tremendous strides accomplished during the year 1949. From an economic standpoint, the industry is considered basically sounder than ever before in the half century of its existence. To a great extent, legislation has played a considerable role in its development, as have major contributions from science, and the far-sighted vision of the men behind this gigantic enterprise.

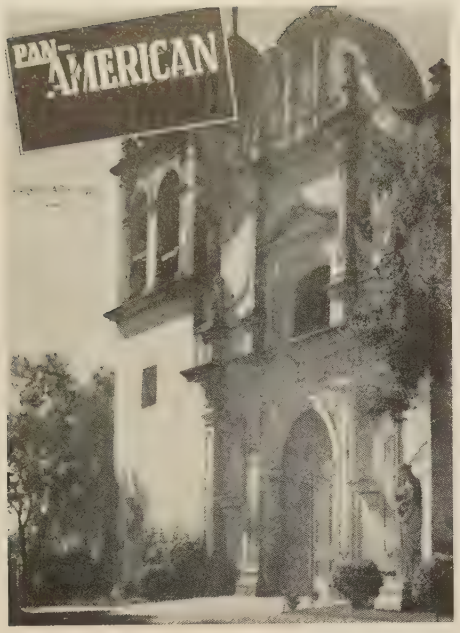
Executive

J. J. Bogdanovich, President French Sardine Company, Terminal Island, California.



Pioneer

Gilbert Van Camp, President, Van Camp Seafood Company, Incorporated, Terminal Island, California.



FEBRUARY 1949

ECONOMICS

Treaties, Strikes, and SCAP

IN January 1, 1948, dark clouds from the West obscured the horizon, and men of the fishing industry wore wrinkled brows. Rumors that Japan had shipped vast amounts of canned tuna to New York markets gained in proportions that rapidly dispelled any convictions regarding their authenticity. Already immersed in discussions with the State Department relating to foreign imports from Chile and Peru, this new menace appeared to present one bordering on a major blow to the economic price structure of canned tuna sales in the United States. It was believed in many circles that this move by Japan was an attempt to gain an "experimental toe-hold," determine if American markets would accept Japanese-packed tuna and, if so, how much, and thereby regain a measure of her former economic world status.

While still in the grips of the Japanese situation, the Marine Press Association reported that the United States Navy, in conjunction with its rehabilitation program, was negotiating for funds to establish a fishing industry on the southern coast of Tutuila, at Pago Pago, in the Samoa Islands. The plans called for construction of a packing plant with a capacity of 350,000 cases of canned tuna annually; and the industry viewed the dumping of 350,000 cases of canned tuna on the American markets without humor.

The U. S. Tariff Commission, and the Committee for Reciprocity Information, had just opened hearings for proposed negotiation of trade agreements with 11 nations. Items considered for tariff increases, decreases, et cetera, were tuna, bonito, yellowtail, anchovies, and antipasto. Donald P. Loker, of French Sardine Company, Terminal Island, appeared as Chairman of the Committee on Trade Agreements of the California Fish and Canners Association, Incorporated, and protested lowering the present tariff on canned tuna, bonito, and yellowtail. In a Reciprocal Trade Agreement previously made with Mexico, Peru, and other nations, the tariff had been reduced from 45 percent to 22½ percent covering tuna. Loker presented a strong argument for the restoration of the higher tariff in view of the Japanese situation.

And Dr. W. W. Chapman, Special Assistant to the Undersecretary of State, was asked in San Francisco, where he talked before the California State Chamber of Commerce, what he thought of the Japanese situation, and he replied that it would "take study, and any discussion would serve to notify countries that will be affected until the proper time." Discussing at that time anything having to do with Japan's steadily-climbing fishing industry, would "be unwise," Chapman added, bluntly.

Meanwhile internal strife raged within the industry's own back yard, in the nature of a price dispute between canners and the fishermen themselves. Canners refused to guarantee current dockside prices per ton to boats sailing for southern fishing grounds. And the A.F.L. Cannery Workers and Fishermen's Union refused to allow the boats to depart without a previously stipulated price, and no boats that had re-

turned were permitted to unload their catches.

Tahiti was next bitten by the moral complexes of democracy and suddenly vented an interest in developing a tuna industry down there, and the hot-bed in the Pacific became still more complicated. Allan S. Davis, president of Hawaiian Tuna Packers hopped off to Papeete with his fist full of papers to arrange an agreement with the representatives of Oceania. This opened a slot for Americans to fish in French waters. Further negotiations resulted in a tight ball of worms involving the Hawaiian packers, the Tahitians, and Samoan interests, in which Harold Gatty of round-the-world flight fame and the U. S. Navy were mixed more or less potentially, and the Japanese who poached industriously on the side.

About this time an American canner from Astoria, Oregon, revealed (asking that his name be withheld) he had been contacted by Japanese interests with a proposition they cooperate in the further development of Alaskan fisheries to their mutual benefit. Under the suggested set-up of joint operations, a treaty was proposed in which 70 floating cannery ships could operate to produce as much salmon and crabmeat as Japan's total pre-war output. The American canner was so shocked that he turned the letter over to Dr. Wilbert Chapman, Special State Department Assistant for fisheries, who termed the incident a "sharp reversal" of pre-war policy.

THE tuna fishermen's strike remained a lurid glow on the horizon. And claims for unemployment benefits totaling 100, were submitted to the California Department of Employment offices with every possibility that the figure would reach 2000. There existed a matter in question as to whether the claims could be paid, in as much as the law stipulated benefits could not be paid to persons unemployed as a result of a trade dispute. Finally one packer agreed to guarantee prevailing prices per ton to boats leaving and a few fishermen resumed their vocation. Most others, however, remained locked in port. Canners had, by this time, agreed to meet 85 percent of the A.F.L. Fishermen's Union demands. But the Union balked.

At the same time, the normal seasonal decline in cannery employment was in progress, and stimulated to some extent by the idle fishermen. And there seemed every possibility that the importation of foreign tuna would affect cannery operations further. Experts pointed out, also, that where the average American cannery worker can sometimes make as much as $100 per week, or from 10 to 30 times as much as foreign labor, imports could have a drastic effect upon the American price structure unless the former 45 percent tariff was restored.

There might have been some measure of consolation in the fact, (coming as it did at this time) that a strike existed in the Japanese seamen's union, in which more than 300 ships were hitched to the docks. The strike resulted after a request—and refusal—of a 30 percent wage increase. According to the Japanese Union, the move was made expressly for the purpose of forcing the government into passing a supplemental Budget Bill.

Then, with a suddenness that left the fishermen goggle eyed, the American strike ended. The canners had agreed to the dockside price of $340 per ton to boats leaving and the tuna clippers streamed into southern waters. There still remained a bit of mysticism over the unheralded settlement, because the canner's logical stand had been that high inventories forced them to slowdown the intake. The inventory was described as almost 700,000 cases, and canners didn't expect to dispose of this amount before Lent. It subsequently developed that the motivating force behind the canner's quick move to settle the dispute arose from the stated intentions of a Tacoma boat builder, one Al Davies, who reputedly advised the canners that he owned two boats then fishing there in the south and that if the canners didn't accept his fish, he'd dump those loads in the East. This statement had a galvanizing effect. Such a move on the part of Davies could establish a precedent that other boats might follow.

But the fishermen were fishing, and it was some time before they heard, or worried, about the fact that an official of the Costa Rican Government was in this country to make application to our State Department in Washington for a loan of $300,000 from the U. S. to promote the tuna fishing industry in Costa Rica.

Before the boats returned Report Number 173 of the Natural Resources Section, SCAP, hit the desks of fishing executives along the Coast. The document featured an opinion from a press conference relating to Japanese fishing areas and to authorized Japanese expansion of fishing grounds. It stated that General McArthur might decline to extend fishing areas, and based this belief on the consideration that Japan must first prove obedient to present regulations and demonstrate an ability to throttle over-exploitation; and that they must learn that sustained yield results from research and control. Recognized authorities admitted that the latter might present some problem to the Japanese where the scientific aspects of this program concerning research must meet high standards.

Other problems also confronted the industry about this time. One had to do with the Government's Reciprocal Trade Agreement, which they had blissfully believed to be sufficiently well "agreed" so that American fishing interests were

Gravy

Tuna fishing from a Japanese boat off coast of Hawaii. SCAP recently removed further restrictions of Japanese fishing, move caused hullaballoo.

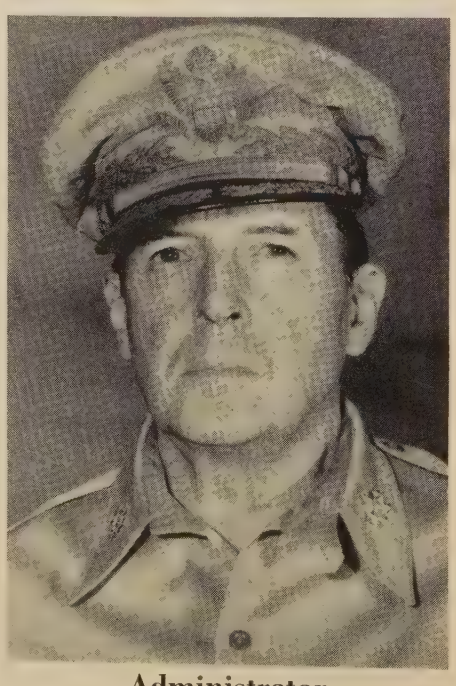
not compelled to compete with foreign imports. Somewhere along the line, the thing failed to equalize itself and balance; and canners put up the howl that continued imports at the low tariff (22½ percent) boosted their inventories sky high. In the same pot of hash with this situation, West Coast canners stood to lose their shirts, with ever increasing demands made by the fishermen for higher prices for raw fish, coupled with the fact that boat owners intimated they could unload their fish cheaper and nearer the fishing banks by taking their load to Texas, through the Panama Canal. This idea left the canners cold, and the fishermen, in turn, hot for some time. Both Houston and New Orleans were bidding for the fishermen's favors, and to make matters worse (if this could be) new money interests came in with ideas of building new canneries in the Gulf cities. New Orleans lapped up that idea, and went so far as to offer free camp sites for canneries. With the whole industry gasping for breath, the West Coast canners, jumped into the situation with stringent aplomb, and announced that they, themselves, had looked the situation over and were considering moving their facilities to the Gulf States. This announcement brought about a remarkable state of affairs, wherein everybody got a trip to Washington, threw a big party and had a good time, then decided to forget the whole thing.

LENT came into the picture, and canners settled down for the six weeks to await results. According to all theories, this event should commemorate the reduction of huge inventories that harrassed their greying skulls, and worried the fishermen not a whit. Unfortunately, however, the Lenten season failed to produce the desired results, and the canners exploded unanimously with the edict that no more guarantees on the price of fish per ton would be made as of March 21, except to boats that had left the port previous to that date.

Then somebody maintained that more than 300 American fishermen were thrown out of work during the last three years as a result of the tuna boat operators hiring aliens. Word jumped along the water fronts, and everybody began to scream, "beached ex-GI's" and "jobless veterans," until the clamour became so loud the newspapers bit into the thing and spread it all over the Coast and into the backwoods. The contention was that foreign-born relatives of fishermen in the fleet wrote to their relatives, made appointments, and were taken aboard at southern foreign ports and brought into San Diego with perfectly legal passports. When they came ashore they obtained 30-day renewals, and the thing could go on forever. An appeal went to the Fishermen's Union and elicited the announcement that there were but 50 out of 2,000 members reported out of work. The law, apparently could not cope with the situation, and results of an appeal to the Attorney General finally got two aliens deported.

Meanwhile the canners still worried at the bone of their huge inventories, and cudgeled their brain for new methods to induce the American housewife to rush to the store and stock up with cans and cans of tuna. After a great deal of elaborate calculation, the canners concluded that the American housewives were just not educated to the uses of tuna; and that this fact accounted for the reason they had to admit that they had barely scratched the surface in introducing tuna to the public. This confession came at the June 16 N.F.I. convention in Chicago, where it was announced they would, the N.F.I., spend $300,000 during the next twelve months for advertising. This amount will be used to embroider tantalizing fish recipes in local papers, in radio promotion, and thoughts of using television are contemplated, in which the housewife can be shown how to prepare dishes.

Then lightning struck in the form of British purchases of all canned sardine stocks available. The British purchase was said to be $2,000,000, and was arranged for through Economic Cooperation Credits. But this was no comfort to the tuna packers. Curiously enough the British had no palate for tuna, and following immediately came a price drop of $60 per ton dockside in that specie.



Administrator

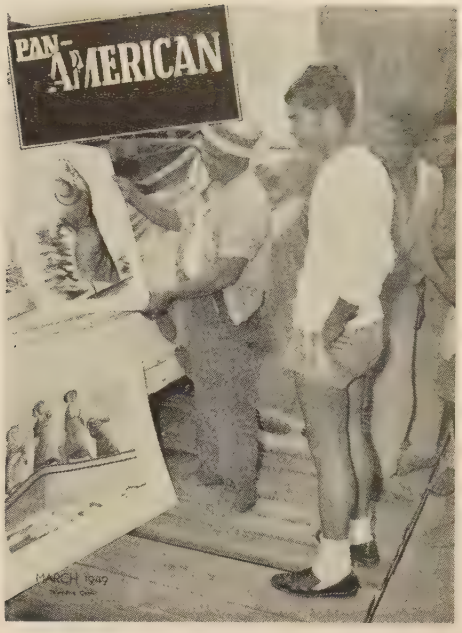
General Douglas MacArthur. His direction of SCAP caused pros and cons to fly thick and fast.

With a Union employee's contract about up for renewal, one canner inadvertently installed new machines which eliminated about 150 workers. The Union screamed, and the packer granted a 15 cent an hour raise. It has been reported that when the contract is again renewed it will call for a 25 cent raise. This information came from Union's publicity chairman.

Following up negotiations to expand their fishing industry under the McArthur regime, Japan submitted a letter to Chief of Natural Resources Section petitioning for extension of her fishing areas. Japan pointed out many of her problems relating to trawling in the East China Sea, and other matters; making promises to observe all restrictions and regulations such as are observed by other nations. They were informed that "Such convictions cannot be created by promises and assurances. They can be fostered only by effective and continued performance . . . and the development and application of a program involving acquatic research. . . . Please inform me if you and other members of the Cabinet have considered these requirements, and what action you have taken to satisfy them."

Cannery workers won several concessions at a jam-packed meeting when their new contract was drawn not previously enjoyed. Vacations and holidays were the chief considerations granted. All workers after serving one year on the job would get three days if 600 hours were put in; six days for 700 hours. eight days for 1,000 hours; 10 days for 1,200 hours; 12 days for 1,400 hours. Monthly workers would be pro-rated on a similar basis. Holiday workers would receive time and one-half for the first eight hours, and double time thereafter. Recognized holidays in the above procedure were: New Year's Day, Labor Day, July 4th, Washington's Birthday, Memorial Day, Thanksgiving, Good Friday, and Christmas Day. Also included in the contract was the stipulation that there would be no discrimination in hiring as to color, race, creed or religious belief.

ON September 21 SCAP extended the area in which Japanese fishing vessels are authorized to fish from the 155 meridian to the 180 meridian, and held the southern limit along the 24th parallel. With this extension the Japanese vessels can now approach to within 3 miles of any island or territory in the authorized fishing area, in lieu of former restrictions holding them to a 12 miles limit.



MARCH 1949

SCIENCE

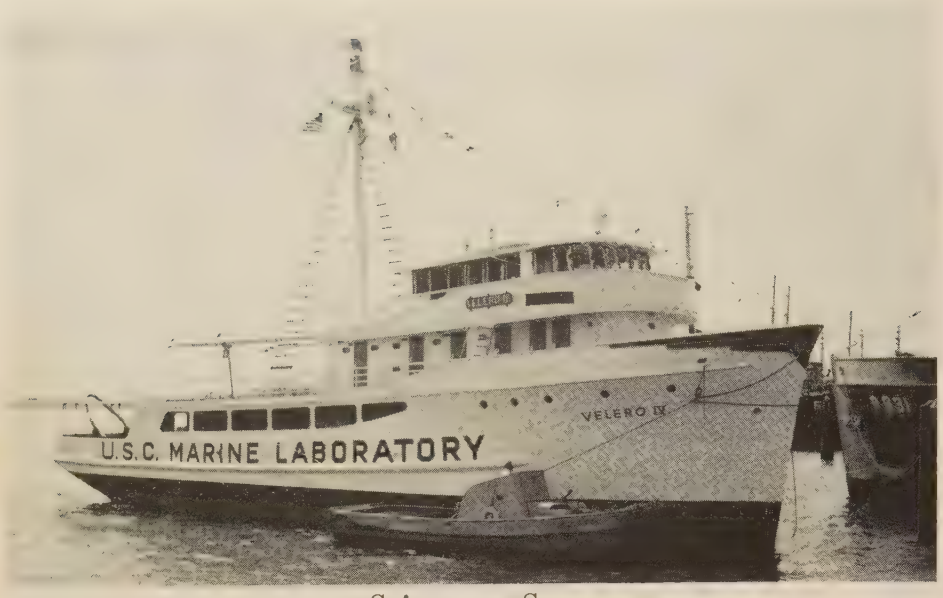
Research and Poisoned Waters

ONE of the most important steps yet effected to advance the search for tuna in Pacific waters was inaugurated with the signing of a pact between the United States and Mexico. Under this six-point program outlined, appropriations were made for the investigation of the abundance, biology, biometry, and ecology of the yellowfin, bluefin, albacore, bonito, yellowtail and skipjack off the coast of both countries. The collection and analysis of information relating to current and past trends in population of tuna: Study and appraisal of information concerning methods and procedures for maintaining and increasing the populations of tuna; Conducting such fishing and other allied activities in those waters as is necessary to attain the ends previously described; Obtain statistics and reports concerning catches, operations of fishing boats, and data concerning fishing for tuna, and, if necessary, enact legislation requiring that boat captains keep records of all operations for the purpose of compiling those statistics; Publish and disseminate reports indicating the results of those findings as well as scientific, statistical and other data relating to the fishing of tuna in the waters of the Pacific Ocean off the coast of both countries; in addition other beneficial phases of the pact were described by Dr. W. M. Chapman, Special State Department Assistant for Fisheries. A part of the U. S. program would "firmly fix relations between the U. S. and Mexico as regards fisheries." Chapman further stated, "By finding out the facts about the supply of tuna in the eastern Pacific, we can eliminate many of the disputes between the U. S. and Mexico over future fishing operations in these waters."

Richard S. Croker, Chief of the State Bureau of Marine Fisheries, announced that he would seek six new positions on his force, if the $197,696 additional appropriation went through. They were expected to include three clerical workers and three junior aquatic biologists. Croker said that the biologists would be assigned to research vessels to aid in the study of the disappearance of the sardine and other species. The total appropriation expenditure requested for the year was $5,632,733.

Allied Headquarters Fisheries in Tokyo were assigned three American representatives of the Pacific Oceanic Fisheries Investigation, a branch of the Department of Interior, to conduct a study of marine life in the Japanese fishing waters. Stress would be laid on the tuna species and skipjack with the hopes of discovering new sources of these fish in the tropical and sub-tropical areas.

Canners in the Monterey area maintain that the U. S. Navy, after the War started dumping ammunition and chemicals sometimes ten, fifteen, and thirty miles at sea near that area and that this poisoned the water and resulted in the almost complete disappearance of the large schools of sardines that annually migrated there after spawning. They say that the area formerly produced three million cases of sardines annually, and that subsequent to the poisoning of the waters the take has fallen off so that only a few of the smaller of the species appear within the area. Recommendations were made that the Navy be requested to dump their surpluses of both chemicals and ammunition at least three hundred miles to the westward of this



Science at Sea

U. S. Vessel Velero IV, one of several government craft engaged in fisheries research.

spot, so as not to pollute home fishing grounds.

With the signing of the pact between the United States and Mexico plans went forward for the establishment of a Scientific Investigation of Tuna in southern Pacific waters by the two governments. The convention was to be comprise of two national sections of four members each representing the two countries to engage in the scientific investigation. It was pointed out that the present information available, based on studies made in the past, was not sufficiently extensive to indicate whether or not tuna were in danger of depletion now, or in the immediate future. The long range plan of joint enterprise between the two countries could be worked out to maintain a population of these fishes at a more or less constant level, through the years, for maximum utilization without danger of depleting the supply.

Dr. R. J. Mahoney, Senior Natural Resource analyst for the Library of Congress, announced in a session of the Senate committee's hearings of the Interior Department, that it seemed, that for every dollar spent in fisheries research there were approximately twenty dollars shot on soil analysis and farm administration. The balance apparently was out of joint on the basis of actual figures, and something should be done to equalize this condition.

THE *N. B. Scofield* and the *Yellowfin*, the two major vessels of the Fish and Game Commission research fleet were reported in drydock for large scale overhauls in the yards of the Long Beach Marine Repair, prior to setting forth again to scout for albacore and sardines, oceanography and currents.

Dr. W. M. Chapman, Special Assistant for Fisheries and Wildlife to the Undersecretary of State, at a Fishery Products Conference of the National Canners Association Convention in Atlantic City, N. J., pointed out the following features from which the fishing industries of the world suffer chiefly: "In the past fifty years, we have all had a good deal of experience in draining the sea of fish. The fur seal herds of the Pribilof Islands, which probably numbered originally five million individuals, were reduced to less than a quarter of a million seals. Then, by the simple expedient of not killing them so rapidly, the herds were built back to a level of more than three and a half million individuals. The halibut fishery of the North Pacific built up to a peak of yielding more than fifty million pounds per year, then dropped to where it could produce by the hardest kind of fishing less than forty-four million pounds of fish per year. Again by the simple expedient of not fishing so hard, the halibut populations of the North Pacific banks have been built up until they produce steadily in the neighborhood of fifty-six million pounds of fish per year. Two experiments of vast extent and tremendous expense have been carried out in the North Sea. Then the First World War came along, and for four years fishermen hardly dared to venture upon the sea. At the war's end, to everyone's surprise, the fish stocks in the North Sea had increased greatly and the fishing was good again. Once more it commenced to slide steadily downhill. Then came the Second World War. Once again few fishermen dared the open sea . . . at the end of the war, the populations of fish in the North Sea were found to have increased in size, and the size of the individual fish were greater by far than before the war. Certain rivers in Norway had been producing at a fairly steady rate for the past hundred years. Then commercial fishing was stopped for a time on some of the rivers as an experiment. The number of salmon increased tremendously. Now, fishing on those experimental rivers is producing steadily from ten to thirty times the weight of salmon each year than they had produced annually in the hundred years preceding.

"Before a fishery starts, the virgin fish population is in a state of balance with nature. As the fishery increases in intensity, the yield from it becomes greater, the total size of the fish population continues to decrease, and the rate of total replacement of the population continues to grow. But this cannot go on forever. At last there comes a point where the fishing intensity becomes so great that the fish population is no longer able to meet it by increased reproductive ability. When the fishing intensity continues to increase beyond this point, the actual yield from the fishery begins to decrease.

"The difficulty is that there is no way to put the brakes on an international fishery once its growth has started. Should any two or three nations get together for the purpose of putting on the brakes on the expansion of one of their fisheries which is expanding beyond the capacity of its fish stock to produce, then the fishermen of a fourth or fifth nation will flock to this area to fish.

"We seek to establish the principle that countries off whose coast a fishery lies and countries which participate year after year in a fishery in a major and consistent manner, have a primary interest and responsibility in keeping those stocks of fish at the level of abundance that would make possible the maximum yield from them year after year . . . "

A MOVE to duplicate Southern California's tuna industry is reported underway in South Africa, and is being aided by the purse seiner *North Cape* which started an 11,000 mile voyage to Capetown with five crew members under Captain Otto Mohr of Los Angeles. It was reported that the Atlantic Fisheries Industries there had discovered large tuna banks off the coast during the war.

The Public Health Service acquired a Water Pollution Control Advisory Board, consisting of eleven members, at the last session of Congress, as a result of the Taft-Barkley Act. President Truman appointed, as one of the eleven members, Carl D. Shoemaker, Conservation Director of the National Wildlife Federation. Shoemaker was first

head of the Oregon fish and game commission, and later as Secretary of the Special Committee of the United States Senate on Conservation of Wildlife Resources. Active for 34 years in the Wildlife Service, Shoemaker was one of the chief advocates to urge Congress to enact water pollution control measures.

Reports from Los Angeles upon the return of the *Velero IV*, research vessel from the University of Southern California, which has utilized dredging and dragging methods to discover various types of fish in the Gulf of Lower California has resulted in turning up virtually no marine life whatsoever in the area. Both clams and oysters, known to have existed there in the past were described notable for their absence, and it was said that fishermen have turned to other areas for these species. Results of effects of water temperatures taken in the area on marine life were not disclosed in the reports, although this was a part of the study made.

Efforts to "meddle with the love-life of sharks" fell flatly on its face, according to E. L. Macaulay, executive officer of the State Fish and Game Commission, and was described as "ridiculous." It seems that the Assembly acting on the passage of a bill introduced by Assemblyman Vincent Thomas, of San Pedro, had directed the Commission to capture large numbers of Soup Fin Sharks (males) and transport them south where the females of the specie were supposed to reside. Since the sharks were notorious for killing themselves when taken into captivity, particularly when netted—which was the only known method to hold them, the plan lacked any basic feasible qualities. And it was pointed out that previous attempts to take sharks into captivity by Drs. Chapman and Kask of the Steinhard aquarium and the Bureau of Marine Fishes, has resulted in the death of all sharks thus taken. Macaulay went on to say, "There is no reason to believe the Soup Fin Shark would react favorably to this forced connubiality."

The House of Representatives had just approved an appropriation of $900,000, when President Truman asked for $89,000 more. The money was for equipping three exploratory vessels to search for new tuna banks in the mandated islands of the Pacific, and was authorized under the Farrington Act, approved by the 80th Congress. The service was expected to open vast new tuna grounds for the American industry. A million dollars had already been appropriated the previous year, and the initial program was laid out under the direction of the Fish and Wildlife Service.

The California State Fish and Game Commission meanwhile was going ahead with a full-scale program of tagging bass and salmon in the Columbia River section.

Sportfishing interests agitated introduction of a bill in the State Legislature, by Representative Earl Stanley of Orange County, to forbid kelp cutting in those and adjacent waters. This resulted in a blast from Claude C. Zobell. marine microbiologist at Scripps Institute of Oceanography, which among other things recommended kelp cutting as an aid to the plant's growing processes, and pointed out the benefits of kelp plants to fish life. It appeared also that the U. S. Fish and Wildlife Service had made extensive investigations of kelp cutting for the past twenty years, came out cold in opposition to any kelp legislation.

PORTUGAL about this time was in the throes of a practically paralyzed sardine fishing industry, which they attributed to steam fishing vessels in that area of their coastline. Under Portuguese law steam trawlers are permitted to operate only up to the six mile limits off shore. This left the inland areas open to the smaller boats, who were the ones accredited chiefly with producing the sardines necessary to their fisheries. Recent government regulations had permitted the larger vessels to operate within the six mile limit, and the small boat operators were unanimous in their opinion the larger boats caused the poisoning of the waters there, and thus the disappearance of the sardine.

The year 1949 saw a tremendous increase in the commercial importance of mackerel, and the California Division of Fish and Game instituted a research program designed to provide sufficient knowledge of the species to permit its proper management. In this, the first problem of major importance was to determine the range of the mackerel, and where they spawned, and to discover the number of species related. A tagging program had been devised as early as 1935, with a view to accomplishing those ends, and this was carried on until the beginning of the War when operations were suspended. Tags were collected in the 1946 and 1947 seasons. Results of the tagging operations disclose that mackerel were abundant along the Lower California coast, and that heavy spawning occurs in Mexican waters. Their population becomes increasingly limited north of Central California, and does not support a fishery north of Monterey.

A pact with the United States and the Costa Rican governments was signed which contained much broader aspects than the one in force between the U. S. and Mexico in that it allowed participation with other countries whose fishermen operate in those eastern Pacific waters where research and investigation is to be accomplished. The new convention will be called the Inter-American Tropical Tuna Commission. While the program basically covers the investigation of tuna and tuna-like fishes, the study of anchovette and other bait fishes will also be included.

Analysist

K. Hovden, President Hovden Cannery, Monterey, poses with his wife. Hovden's contention that Army had inadvertantly poisoned waters in Monterey Bay caused controversy.

APRIL 1949

LEGISLATION

Sardines, Imports, and Big Fish

THE Sardine Advisory Committee to the California Fish and Game Commission went on record with the announcement that the State should establish a Bureau of Marine Fisheries Management separate from the Fish and Game Commission to administer the problems of the fishing industry, during a two-day session at Monterey in discussions for proposals to adopt a long range fish conservation program. Two salient features came out of the ruckus, which will be renewed later in San Pedro: (1) To support permanent adoption of the present sardine conservation program now in operation, including the 8-inch minimum length regulation and the Northern California August 1 to January 15 season; and (2) Recommend to State Legislature to enact statutory provisions for the new Bureau of Marine Fisheries, also a two-year conservation program including the various committee recommendations. The governor was asked to appoint a five-man sardine-mackerel advisory board to make recommendations to the Fish and Game Commission, pending the appointment of members to such a Bureau. Comprising this board would be members representing labor, management, boat owners, the public, and one other member.

California Democrat Cecil King's function in merchant marine and fisheries circles took on more power when he moved into fourth place on the House Merchant Marine and Fisheries Committee. Most observers visualized King as committee chairman within the next two years. As matters stood King was ranking majority member of the Sub-committee on Ship Construction and Operation, and chairman of the Salt Water Fisheries Sub-committee, a vital legislative body to the Pacific Coast Fishing Industry. And since the Sub-committee was headed by an easterner, King had full authority on all shipping policies and legislation on the West Coast. King was a member of the sub-committee that straightened out the Pacific Explorer case to appease the fishermen, who had charged that this experimental fishing vessel was Federally-financed, that this condition placed the government in the position of functioning as a competitor to the tuna fishing industry off the coast of Central America at that time.

Assemblyman Frank Luckel, of San Diego, introduced a bill to extend the right to catch tuna weighing more than 150 pounds for another two years. Popular opinion gave the measure every break to become law. The Big Fish Bill, under which bluefin and yellowfin tuna weighing more than 150 pounds could be caught was destined to expire in June. Luckel pointed out that dumping of fish after they were caught would undoubtedly result in the death of many. Some opposition to the bill was expected from the canners, who maintained the larger fish would not "fancy pack."

Optimism was held by the sardine industry at Monterey over a series of legislative proposals designed to establish a uniform sardine season throughout the coastal regions of California. It was proposed that the season should be from September 1st to January 1st, limiting catch during this period to eight inches; and from January 1st to April 15th, limiting the catch during this period to

12 inches. Measures prohibiting out of state boats from removing sardines from Fish and Game jurisdictional waters was also a feature. On the other hand great concern was expressed within the industry over the proposed limit of 100,000 tons bag limit recommended by Richard S. Croker, chief of the State Marine Fisheries Division. It was said that this, in effect, would leave Monterey but 30,000 tons of fish, and possibly cause them to cease plant operations most of the season.

HOPE died however when the California Fish and Game Commission at Los Angeles set a limit of 14 inches on sardines taken from February 2nd to April 15th from the Los Angeles area, and 14 inches maximum length was also imposed for the Bay areas from January 16th to April 15th. At this time Julian G. Burnett, Chairman of the Sardine Advisory Committee, predicted that the netting of sardines would be almost hopeless, because few of the species attained that length.

Meanwhile Mexico's legislation had come through with a new tax severance law for certain species of fishes which became effective with the first of the year. This law was expected to have a direct effect upon Mexican permit costs for vessels operating within those waters. Fish species affected by the new law were: abalone, clams, cabrilla, shrimp, squid, curbina (white sea bass, spotted trout, and corbina), lobster, crawfish, mullets, oysters, octopus, robalo (gulf pike), and totoaba. There was also some speculation regarding the effect of the new law on fish products exported to the United States.

The Sardine picture reentered the scene later with bills being recommended to change the present sardine season to September 1st to December 31st for the whole of California. Present seasons are August 1st to February 15th in Monterey, and northern California, and October 1st to March 1st in Southern California waters. And complicating an already confusing picture was a new phase added which would make it unlawful to take sardines for any purpose but reduction or packing except during the state-wide season. Vincent Thomas Assemblyman of San Pedro, also introduced a measure prohibiting halibut fishermen from filleting their catch before reaching shore for inspection; the contention being that the inspectors couldn't ascertain the size of the fish. Another measure was to change the present size bag limits on abalone. Recommendations were: eight inches on reds; six to seven and one-fourth inches on greens; six to seven inches on pinks; and five to six inches for blacks.

Hot on the heels of the sardine dilemma, the industry was thrust into other complications with H. R. 1211, the Trade Agreements Extension Bill, that had developed into a House and Ways Committee headache. Don Loker of French Sardine Company, Terminal Island, and Chairman, Trade Agreements Committee, for CFCA, was fighting on behalf of the fishing industry for inclusion of provisions making it necessary for the U. S. Tariff Commission to investigate each individual article considered for possible modification of duties, and report to the President, who had powers to invoke the "escape clause" when peril points were reached which threatened a particular product in individual industry.

Frank Luckel was back in the picture at this time with a new bill designed to reduce the personal property taxes on small boats. Luckel's contention being that many inequalities had come to the attention of Sacramento in the assessing of taxes, and that the situation had reached the point where, "it resulted in a material decline in the sale of new and old boats." Luckel's proposed bill would provide an assessment of but 50 percent of the boat value. Also Luckel advocated the registration of boats similar to the registration of automobiles, in which a registration card would be issued to both the owner and the operator.

Foreign imports of fish and fish products was still a major headache with the fishing industry, and the point was fast approachnig where the industry felt disaster was close on their heels. And the fishing heads turned out en-masse and pitched a wingding at the palatial Mayflower Hotel in Washington, D. C. in earnest efforts to gain recognition of their problem before the lawmakers. The signal of free food served the purpose of bringing the gentry together; but failed signally in bringing about the generally supposed reactions of a full-stomach. The fishing industry was left in a quandry regarding the reactions of the legislators whose attitude over the whole fishing business was rather vividly expressed by one of those present. "The tuna business can go to pot rather than jeopardize our foreign policy. If the American fishing industry cannot compete with foreign fisheries, they will have to revamp our plants and put something else in their cans." Later that week 11 Congressmen in committee reconvened to listen to various delegations urge that a more equitable foreign import system be devised. The legislators listened politely, and were complimented by their Chairman for much patience; then promptly shot the project to the Senate for further rehash. And the men of the fishing industry left with this parting shot, "The fishing industry of America must now use the right of petition as guaranteed us by our Constitution. . . . Every member of the industry, whether a fisherman, shore worker, or an owner of boats, plants, or equipment can do this by petitioning his U. S. Senators and Congressmen to insist on reasonable quota limitations of imports and some way to retain our former export markets."

THE bill to reduce taxes on vessels had become Assembly Bill No. 1127 by this time, and was before the State Legislature. It had been sculped to regulate the stabilizing and equalizing of values of both documented and numbered boats, and was for the reduction of taxes. The Boatowners Legislative Council was behind the Bill, and urged that all boatowners whether they operate commercial or pleasure boats to get into the swim and contact their Senator or Assemblyman.

A move to deputize 20 percent of the Ketchikan halibut fleet was underway to enforce new regulations requested for fishing within specific areas. Areas designated for changes were Area 2 which was recommended opened by the Seattle fleet the first eight days of every month, and Area 3 the first 10 days of every month. Ketchikan fisheries wants both Areas 2 and 3 opened the first ten days of the month. Jurisdiction was expected to fall ultimately into the lap of the U. S. Fish and Wildlife Service and the Coast Guard; but the request was set up to call for an International Fisheries Commission administration.

Back on the sardine front things were pretty much a mess. But the northern and southern factions had ideas, which they contended were important to their

Legislator

Captain Frank Luckel of San Diego, California, Assemblyman. Led fight over Big Fish Bill.

individual needs regarding seasons. The north had a season from August 1st to February 15th, and the south had October 1st to March 1st. Assemblyman Vincent Thomas, of San Pedro, in keeping with the wishes of the fishermen in that area was advocating for a single season from September 1st to December 15th; while Senator Fred Weybert, of Salinas, for the northern interests held out for a split season of August 1st to December 15th in the north, and September 1st to January 15th in the south. Thomas defended his measure with the statement that the present season granted a seven months opening, and that he proposed to cut that in half. Also, he advocated that the Fish and Game Commission should set the season take; but provided for a minimum of 200,000 tons of sardines and 35,000 tons of Pacific mackerel, and called for one-third of the total tonnage to go for reduction and five percent for bait. The Commission, could of course raise the limit of the tonnage at any time deemed necessary at their discretion. Weybert's proposal contained a clause prohibiting fishing on Saturday and Sunday nights. This was believed to have the backing of Monterey fishermen and cannery workers; but was expected to result in protests from the Santa Cruz fishermen and cannery workers who worked weekends.

Then Clinton D. McKinnon, San Diego's House Representative true to his campaign promises, leaped into the import-export picture for the tuna interests, and appealed in a long letter to President Truman for a flexible quota system that would provide for foreign

Interested

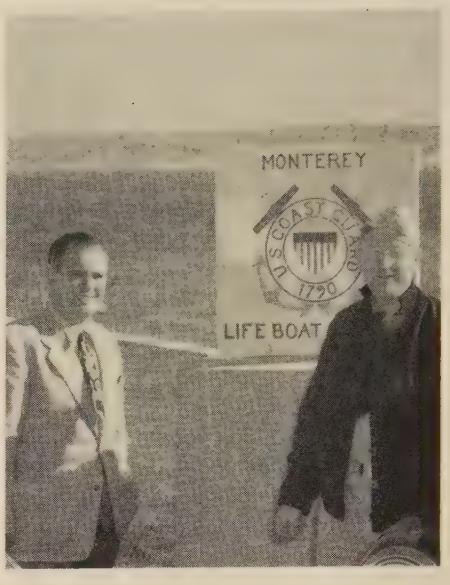
Mathew C. Monise, pioneer fisherman of San Diego, California, aided Luckel in Big Fish scrap.

fishing interests, as well, as our own, with a genuine incentive to expand the market in which all could share. McKinnon pointed out that imports in 1947 were 292,757 cases; in 1948 they were 407,626; and in 1949, the estimate (based on the first three months of that year) would be 840,000 cases. If our own industry packed an estimated 7,000,000 cases, and the United States market could only absorb about 7,000,000 cases, that the imports combined with our home production would eventually destroy our industry.

With July 1st looming as the date when legislation must act to preserve the job of Doctor W. M. Chapman, or if Secretary of State Dean Acheson failed to order it continued, the industry stood to lose the services of a valuable man. Concern was expressed throughout the industry because Chapman had proved indispensable in his capacity of Special Assistant to the Undersecretary of State on matters pertaining to fisheries. He was considered to be the best spokesman on international fishing problems in Washington. Chapman, however, seemed little concerned over the outcome of events, and it is probable that with several organizations ready to take advantage of his knowledge and services his financial worries were few.

Assemblyman Vincent Thomas' bill to set a uniform, and shorten, the sardine season throughout California and eliminate the so-called summer packing, was smashed flatly when the Senate Fish and Game Commission voted 6 to 3 to table the measure. And following closely, the Assembly Fish and Game Committee refused to approve a bill by Senator Clyde Watson, of Orange, sponsoring the northern interests, and continued, by a vote of 4 to 5, the present split season, on a shorter overall period, eliminate the summer pack, and set an eight inch limit on sardines for processing. The sardine season is August 1st to February 15th in the northern areas, and from October 1st to March 1st in the southern area.

But the industry viewed with pleasure the defeat of Frank Luckel's bill which would have altered most of the present law regarding the reduction plants, and provided that the sardine canneries could use but 25 percent of the total catch received each month, instead of the present 33⅓ percent for reduction purposes. Roy Beaton, who represented the Southern California Fish Canners Association, expressed strong opposition toward



Lawmaker

S. Buck Russo, left, Monterey, California City Councilman, central figure in Monterey's sardine controversy. Right, Chief Anderesn, U. S. Coast Guard Station, Monterey.

the bill, which also gave practically plenary powers over the industry to the Fish and Game Commission.

The quota system of governing imports of fish products, as recommended earlier by the House Merchant Marine-Fisheries Subcommittee, was flatly slapped down with the explanation that it would result in retaliatory measures from other countries. And recommendation was made that the industry, instead of using this measure to combat excessive imports, should figure out some way to cut down their production costs, stimulate domestic consumption, and if necessary seek federal subsidies, to maintain an economic balance. The state department contended that while foreign imports had jumped somewhat in the past three years, so had domestic consumption, and there the industry was crying wolf, and not at all in the bad shape they claimed to be. And wound up with, " . . . solutions are up to the industry itself and there is no danger from increased imports of fish products."

ASSEMBLYMAN Frank Luckel's bill to extend the right to catch fish weighing more than 150 pounds passed; but not without more than the usual number of rocky pitfalls a measure encounters. It sailed through both the Assembly and the Senate only to strike a snag when it came before Governor Warren; who wanted to hear more about it. Luckel gathered forces and set out for Sacramento well-heeled for battle. Accompanying Luckel were Mathew C. Monise, George Soares, and Harold Morgan of San Diego's powerful American Tunaboat Assn.

MAY
1949

VESSELS

Spit, Polish, and Radio

WITH the search for the elusive tuna moving ever into farther waters, the trend for longer range vessels with proportionate pay loads commensurate with an economic balance have marked the majority of the newer boats for the past three years. And marching in step with these developments have come the modernized equipment to facilitate the operation of them. Some of this equipment, for one reason or another ,has never come to be utilized by the industry; but it nevertheless exists. One such item, long a recognized need in the fishing industry, and fast becoming more acute as the distance for tuna grounds multiplies and current fishing banks become crowded, is the Siebert 500-watt, Directional Antennae Coastal Harbor Radiotelephone Station.

A young San Diego electronics engineer, Harvey E. Siebert, has bombarded the Federal Communication Commission for more than a year in efforts to gain permission for the installation of such a station. Merits of the project, as pointed out by Siebert, would eliminate the present chaotic condition that presently exists on the ship airways channel, through which all communication from ships at sea and connections on land must pass. Siebert's contentions are, and the boat skippers are heartily in accord, that the channel is so cluttered with idle chatter among ships, improper modulation of ship radio gear, and in many cases complete disregard of regulations. Not only would the installation of such a station be of manifestly great benefit to the fishing boats, but it would in addition, provide an invaluable service for all ships traveling the sea lanes off the coast of Mexico and Central America.

Advantages of such a station, according to Siebert, are manifold. Signal strength would be approximately double that now in use, and a constant guard would be maintained on channel 2738 KC, emergency frequency, and this would enable the station to be of immediate assistance to any ship in distress. It is only under ideal conditions that the vessels in the extreme south are able to contact the present KOV station at San Pedro. At all other times most vessels, and those in particular that modulate only 25 percent of their capacity, must rely upon re-transmission of their message by other ships at intervals along the ship lanes. Siebert has proposed to beam a signal all the way down the coast that would reach into Central American waters. Also, the station would provide all vessels with periodic weather reports; broadcast San Diego Coast Guard notices; broadcast hydrographic information from the U. S. Navy, at the Eleventh Naval District; and make available reputable technical information, at no cost. The latter would include reports on signal strength, readability and percentage of modulation. It was pointed out that many radio operators aboard vessels cannot ascertain their actual percentage of modulation (which is the key to whether or not boats can hear their messages) without making a direct contact and requesting information as to their strength. FCC red-tape may hold up this station for

Shipbuilder

C. Arnholt Smith, President, National Steel and Shipbuilding Company, Incorporated, San Diego, California.

some time; but its need is beyond doubt one of major importance to the fishing industry.

As many skippers and fishermen know, it takes time to rush into the wheel house and throw the wheel over to keep in range when fishing a school of tuna. It would seem that the Sperry Gyroscope Company has solved this problem with the invention, now on the market, of the Sperry Magnetic Compass Pilot. The gadget is adaptable to most any fishing vessel, large or small, and can meet any requirement up to 17,000 pounds steering cable pull, and operates on either 32 or 110-volt DC. Once set the Compass Pilot will maintain a steady course for unlimited periods of time, and thus allow the skipper to chum bait or otherwise occupy himself during actual fishing operations. Extensive tests have been made of the Sperry Magnetic Compass Pilot on Ohio and Mississippi Rivers with excellent results obtained. River boat captains have said that many long sweeping curves in the rivers could be made under pilot control with greater degrees of steadiness. As compared with manual operation the Sperry pilot rudder applications numbered 14 per minute and the course was held to 1½ degrees, while a helmsman in calm weather made 40 adjustments per minute and held a course within only 10 degrees.

NATIONAL Iron Works, of San Diego, brought something new to the ship building industry with the construction of a two-story deck-house, pilot-house sub-assembly that was claimed to save nearly 600 man-hours in the building of the *Carol Virginia*. The 20-ton sub-assembly including living quarters, pilot house, and chart room was completed with such furnishings as cabinets, bunks, chart tables, all wiring and electrical connections, as well as plumbing connections, before it was lifted to the main deck of the *Carol Virginia*, and fastened in place in a matter of a half-hour.

A new 140-foot tanker has been purchased by Cecil W. Drake, of Drake and Bullen, San Diego, and will be stationed in the Galapagos Island area during the winter months, and at Costa Rica, during the winter month, and at Costa Rica, during the spring, for the purpose of re-fueling the fishing vessels in those areas in the future, it was announced early this year. Drake was quoted as saying, "There has been so much trouble in the past in obtaining fuel in that area that the long-felt need may be remedied through a supply of diesel fuel, lubricating oils, aircraft gasoline, and power launch gasoline," by this means.

The *Paramount* was the first tuna clipper to lose an airplane at sea in the Pacific Coast fishing fleet. Nevertheless the *Paramount* brought home the bacon in the nature of 215 tons of tuna. Wrapped up in a slashing 80-mile gale off Acapulco, Mexico, the $6,000 plane was literally ripped out of its pontoons and hurled from the deck in the blow. Only the pontoons and the engine of the plane were salvaged.

And proving that the hazards to equipment ashore can be as costly, was the loss by fire of $15,000 worth of fishing nets in a garage at 242 West Grape Street in San Diego shortly thereafter. Cause of the conflagration was undetermined. Both the garage and the fish nets were a total loss to Pete De Maria. It was said that the blaze had been underway for several minutes before it was noticed by a neighbor and firemen were called to the scene.

Avondale Marine Ways, Inc., of New Orleans, Louisiana, entered, for them, a completely new field with the end of the War in the construction of tuna clippers. The mark is destined to stand for a long time in the Pacific Coast fishing fleet with the *Mauritania*, *Paramount*, *Sun Hilarita*, *Sun Jason*, and *Santa Helena* delivered right after the War, and the *Sea Magic*, *Excalibur*, and the *Santa Anita* in 1949. The latter three vessels are described as truly luxurious fishing vessels with the most modern equipment known to the fishing industry and crew accommodations that rank them with the best afloat. All are 121 feet in length, with 28 foot beam, and draw 13 feet three inches of water, and have a refrigerated hold capacity of 220 tons of fish.

Also making a maiden voyage this month will be the new 170-ton fishing boat *Sun Beam*. The vessel was originally known as the *J. A. Martinolich*, and was re-christened the *Sun Beam*. It is the only boat in the San Diego fleet known to have been named after a former boat lost at sea. Credited with the new name was Captain Mike Elich, who professes to hold no stock in superstitions over such matters. The original *Sun Beam* was wrecked off the coast of Cape San Lucas, Baja California. The new *Sun Beam* was outfitted by the Martinolich Shipbuilding Company, of San Diego, and Mike Elich and Dominic Roki are listed as co-owners with Sun Harbor as managing owner.

TAKING the cake for a miraculous escape from Davy Jones Locker is the *Sunderland*, or more appropriately her skipper, Captain Louie Zermotten, of San Pedro, who displayed characteristics generally credited to skippers in times of stress. With full bait holds, the *Sunderland* was bucking heavy seas, and just when the skipper had decided to dump the tanks, a gigantic swell came along and dumped the *Sunderland* on her side. The vessel lay in the trough of the waves with her mast in the water. While Zermotten blasted a Mayday from his radio transmitter, the crew worked to get the one remaining skiff over the side. The other skiff had gone with the swells when the *Sunderland* rolled over. The *American Belle*, 600 miles away got the message and promised aid. After this the radio quit. The electric control panel was under water, and the main engine died. When the vessel went over the bait tanks automatically unloaded some 15 tons of water and fish, and this aided the situation somewhat with the *Sunderland* regaining some of her equilibrium, but not enough to right herself. Louie, observing that the swells would be of considerable aid to the *Sunderland* in righting herself, tried again to get the main engine running. The fuel pump had lost its priming however, and most of the main engine was under water. But it started, eventually. Louie cut the rudder hard over, and waited for a long roller. When it came along, he poured on the fuel and took a long sweeping arc to meet the roller. This did it and the *Sunderland* came upright. With all hands bailing at the tons of water in the holds, and barely afloat, the *Sunderland* headed for shore fifty miles away. By this time aid was on the way from every imaginable source. The *American Belle* had notified the Coast Guard who had a plane out as did the Mexican government as well; but the *Sunderland* made the beach. With sufficient repairs to get back to normal made, the crew fished on the way back to San Pedro and eventually unloaded seven tons of fish.

The demand for the use of light air-

planes in scouting schools of bait fish leaped into prominence about this time with delivery of a plane for the *Queen Mary* at a time when the *Queen* was at sea. So great was the demand, that the plane delivered, went to *Chicken of the Sea* which was leaving for the fishing banks at the time, and another was hastily ordered to meet the *Queen* when she arrived. It was said that so greatly was the search for bait facilitated with the use of the airplane that boats paid for the plane in one trip.

About then the Tacoma Boatbuilding Company slipped the 116-foot *Conqueror* into the water, and described it as the "biggest little clipper in the fleet." The *Conqueror* was a new departure in design and included a semi-raised deck over the galley reducing the free-height of the deck-house and maintained a lower center of gravity. The range was 5,000 miles, and the hold capacity was 115 tons. The *Conqueror* was designed by Arthur DeFever of Long Beach. Under construction in the same yards was another tuna clipper reaching a length of 150-feet, and said to be the largest tuna clipper ever to be built. Also under construction were three more vessels for the fishing fleet of 107-feet in length.

Kettenburg Boat Works, of San Diego, California, proudly announced at this time that last year had seen a return of $100,000 on a $1,000,000 investment in 66 fishing crafts known as the "Kettenburg 38's." The boats were built to specialize in albacore. All were San Diego based, and sailed into Mexican waters to fish by jigging and with live bait.

The *Reina Del Mar*, "mother ship," owned by the Martinolich Shipbuilding Company of San Diego, California, met with disaster off the coast at Abrejo Point, Baja California, when fire broke out and got out of control. The *Reina Del Mar* was a vessel of 914 gross tons and carried supplies of high octane fuel, and provisions for other boats of the fishing fleet. She was headed for Balboa, Canal Zone, when the fire broke out. All 12 crew members were saved, but the vessel was lost.

BURTON CROFTON, president of the Crofton Diesel Engine Company, of San Diego, California, returned from a five-day trip to London and reported that in the future the Crofton name would appear on a small diesel manufactured in Great Britain. Crofton reported that his company had been chosen to handle the distribution of the British diesel in the United States. The British version would be marketed under the designation of Crofton 5/1 and 10/2 in the marine field. Built in two models, the Crofton units come in one and two cylinders operating at 1500 RPM, and delivering 5 and 10 horsepower respectively. American observers say they are the last word in marine use of diesel power for operating generating plants, air compressors, pumps, and small refrigerating plants.

Newest addition to the fishing fleet is the use of helicopters for scouting schools of bait fish, and one that may, possibly, supplant the airplane. Advantages of the whirlagig over the more conventional craft is its ability to hover, land without difficulty on the bait tank canopy, and more maneuverability. The helicopter was first demonstrated in 1947, but at that time, it was considered that the initial cost, and higher proportionate maintenance, were prohibitive. First vessel of the fishing fleet to sail with a helicopter aboard the bait tank canopy was the *Espirito Santo*. This tryout was watched by the entire commercial fishing industry.

Demonstrations aboard Guy Silva's boat, the *Emma R. S.* proved that the use of a new plastic fish, manufactured by Carl Stockman, of National City, California, would save up to fifty percent of the required live bait aboard fishing vessels. The demand was terrific, and it was believed that Fishong Lures, Inc., could not keep up with the fishermen's requirements, since production permitted but 1,000 per day.

The *Scarlet Queen*, largest vessel of its kind afloat, made history when she returned from the southern fishing waters in record time with 600 tons of fish, some of them weighing as much as 300 pounds per individual. It was Charles L. Kaufmann's first trip as skipper of a tuna clipper. Kaufman was formerly a San Diego, California, engineer. Another novel feature of the incident was the fact that the load would be paid for at the old dockside price of $340 per ton. The *Scarlet Queen* unloaded at French Sardine Company, Terminal Island.

First boat of the albacore fleet to break the ice in the 1949 season was the *Sea Fisher*, operating off Todos Santos, Baja California,. Skippered by James Lytle the *Sea Fisher* boated 24 albacore. The catch started 50 boats of the San Diego Commercial Fishing Boat Owners, Inc., docked at the Foot of Fenelon Street, San Diego, California, in a mad dash out to sea.

The middle of 1949 made costly inroads upon the West Coast fishing industry through the loss of vessels. Following in quick succession during a short period of two weeks, more than 12 vessels succumbed to fire, wrecks, and sinkings. While no loss of life resulted, it is still likely that the period of disasters starting with the tuna clipper *Rajo* and ending with the small boat *We Three*, will long be remembered.

Development

Sperry Magnetic Compass. Outstanding 1949 equipment contribution to fleet.

AN erroneous newspaper story busted over the fishing world in 1949 and brought heads up all around. According to the information stated the Mexican government intended to stop issuance of fishing permits in the United States and henceforth these permits would come directly from Mexico City. It developed that the only species of fish affected by the edict would be sharks, and this made no change in previous sources of obtaining permits to fish in Mexican waters.

Technician

Harvey Seibert, electronics engineer. Tried to get over another frequency radio station.

JUNE 1949

CANNERIES

Turbulence and Tribulation

SAN DIEGO City cannery shuffles from their present locations into the South Bay area seemed likely to tee-off with High Seas Tuna Packing Company, at the foot of Canon Street. The firm's lease expired on December 31, 1948. According to Harbor Department officials, however, the plant was virtually assured of operation on a month-to-moth basis, pending the outcome of a decision by the City Council folowing public hearings on the matter. The move, long under discussion by members of the City government, was finally abandoned late in the year.

Industry developments expected to highlight 1949 were the possibilities of the construction of several new canneries in San Diego, following expansion of the tuna fleet and the extension of fishing into new fields opened by treaties into the "trust territories" of the Pacific Ocean. The trend toward larger clippers was expected to accelerate the industry, and make possible the fishing on the new banks, and extensive research were all possibilties given to conjecture.

A new post-war refrigerant broke on the market, and was said to be superior to any other known medium. The new product, called "Super-Ice" was already known to have opened the great West Coast markets to the lobster industry on the Atlantic Coast. All previous efforts to introduce Atlantic lobster to the Pacific Coast had failed even with the fastest means of transportation. Wet ice was prohibitive because of weight and cost, and because of quick thawing made it impossible to maintain temperatures. Dry ice was not acceptable to the airlines, because of the carbon dioxide fumes, which was fatal to the fish. With clean, dry, bricks of the packaged Super-Ice the fish were placed in containers and flown from Boston and New York to San Francisco, where upon arrival they were inspected and found to be in excellent condition. Most lobsters used on the West Coast were imported from Mexico, and the new product held great possibilities of keeping the market at home.

News of the sale of the controlling interest in the Columbia River Salmon Company, Inc., to Superior Packing Company, of Seattle and Tenakee, Alaska, broke with the announcement of new officers named as John T. Tennesen, Sr., President; and John T. Tennesen, Jr., Secretary. The Senior Tennesen is a veteran packer of salmon, operating canneries on Puget Sound and in Alaska. He is well-known to fishing circles throughout Alaska and the Pacific Coast, having served as a member of the Twelfth District Federal Reserve Board, and currently director of the National Bank of Commerce in Seattle. Plans call for the expansion of activities at Columbia River Salmon Co., Inc., and to activate the Ilwaco, Washington plant of the company on crabs, clams, and oysters, as well as salmon and tuna, the elder Tennesen said. Meanwhile no change in the personnel of the company is expected, and McGovern & McGovern of Seattle, the country's leading salmon brokers, will continue to serve as exclusive sales agents for the company.

High Seas Tuna Packing Company, Inc., were granted a six-year extension of their lease on property at the Foot of Canon Street, in San Diego, after

approval by the City Planning Commission.

San Diego's six big fish canneries, which had been paralyzed for nearly three months because of a price dispute, went back into operation. The dispute grew out of a demand by the AFL Fishermens' Union request that the prevailing price of $340 per ton for tuna be maintained. The canneries had sought a lower price per ton, basing their reasoning upon the fact that their inventories were excessive and that there was little likelihood of moving the storehouses of canned tuna onto the national markets for some time. Hope was held by both fishermen and canneries that Lent would alleviate the situation. The break came when Al Davies, of Tacoma, Washington, who had several tuna boats delivering to San Diego canneries, announced that unless his boats could fish and sell their fish, he proposed to take his loads to the East.

Prospects of a huge $6,000,000 cannery to be built at Houston, Texas, and to operate in competition with the West Coast industry loomed bright when a million dollar expedition consisting of a mothership and three fishing vessels invaded the West Coast of South America, lush fishing grounds of the West Coast industry. The boats were from Oceanic Foods Company, of Houston, and William Helis, Jr., of New Orleans. Oceanic Foods is owned by Charles Edwards, who is said to have reported that, pending building of the new cannery, the loads would be delivered to Pacific Coast packers.

Arno Brothers notified the albacore fishermen that they would not be buying that specie for Van Camps this year, which meant that the fishermen would be unloading at dockside. The mooring barges were still anchored out there and their fate seemed undecided. In the meantime the *Linde*, *Robin*, *Priscilla*, and *Ohio* were undergoing painting and refurbishing prior to sale. French Sardine Company was in the process of overhauling their tenders the *Conte Di Savoia*, *California 2* and *Little Perina*, but had not, as yet, stated definitely if they would buy fish at sea.

CONFIRMATION of the fact that Houston and New Orleans interests were not kidding came with the announcement by Ross O. Leeper, Fleet Manager of San Diego Packing Company, that his Company had arranged for delivery of a huge load of tuna from the giant "mother-ship" *Oceanic*. The news might be said to have exploded more than mild interest between officials of the San Diego Harbor Association and the Chamber of Commerce Harbor Committee, and resulted in a meeting at one of San Diego's swank down-town hotels, where for the first time, decisive action was taken. Men well qualified to speak for the industry were invited to talk. For instance, just what was it that other cities were intending to offer San Diego's fishermen that made a move to the Gulf states so enhancing? To begin with, men of the fishing industry mentioned more facilities, less taxes and additional service; all of which were, for the most part, vague items. But the tuna men became specific. It appeared that Texas, Mississippi, and Louisiana were willing to make plenty of concessions to get the industry to move in, set up shop, and employ their people. Harold Cary became even more lucid. He noted among other things, that while the boats of the tuna fleet were tied up in port sometimes 70 days per year, they were still taxed as much as businesses in the city operating every day of the year. More things came up, and proved conclusively, to the City Fathers, that the men of the tuna industry were unhappy in their present home. It startled the city to action, to wit: (1) the Chamber recommended, during the month, that plans for proper mooring and anchorage to aid the fishing fleet be prepared by the Harbor Commission, (2) more study of the situation, and (3) the Chamber's Industrial Committee would ask the Chamber's Legislation and Taxation committee to consider the fishing industry's taxation problems. It might be added, that most everyone in San Diego heard of the problems discussed.

Another jolt was sent in to the proceedings by Hervey M. Petrich, of Tacoma, Washington, a boatbuilder, and a potent voice in the commercial fishing industry. Petrich was in San Diego for a short visit, and among tax problems, he pointed out that in addition to the Gulf Cities bids for the industry, they were situated in far closer proximity to the tuna fishing banks, easier access to major markets, and cheaper labor. Then he dropped a bomb. Some big dough was being raised to establish a huge tuna industry in both Mississippi and Texas, and Petrich, assertedly, held a hunk of it. It was not long after this that Petrich's boat, the *Sherry Ann*, recovered $14,053.90 in taxes paid under protest in San Diego, after she had been assessed taxes of but $390 when built in Tacoma for the same year. The comparison seemed slightly out of kilter, and no doubt had an influencing effect.

The Food and Drug Service, Incorporated, 4917 Huntington Drive, North, Los Angeles, claimed more than 25 members among packers, canners, bakers, and others who received the Award of Merit for cleanliness and sanitation in the industry, during one month of 1949. It was little more than two years previously that William E. Paxton, Thomas E. Collier, Eric A. Gray, and John S. Herr left the Government's Food and Drug Administration to go in business for themselves, after a total aggregate score of 30 years devoted to a service proving that such matters pay dividends. When the service was organ-

Industry

Westgate Sea Products Company. Lost battle for tidelands site, will move.

Senior Producer

West Coast Packing Company, Terminal Island, California.

ized with Paxton, as president; Collier and Gray, as vice-presidents; and Herr, as secretary-treasurer, the company management represented former Federal capacities as Inspector, Chief Inspector, Chemist, Analyst, and Hearing Officer. They started on the theory that smart packers of foods and drugs might see the advantages of getting sanitation okeys from an organization that would make it tough to get a clean slate, and thus net reams of publicity. Such proved to be the case with packers already enmeshed in a dilemma of overwhelming sanitation problems, and glad to have somebody with experience figure out the road for them. Early stages of development of the Service consisted mainly of consultations, with any action to be taken entirely up to the individual packer. It was not long, however, before word spread that an approval from the concern would be good advertising in view of the fact that the men with 30 years in the Federal employ had a reputation worthy of note. Out of this grew the merit system and Honor Roll Award. On the face of it the Award looked tough to get; but the years of microbe hunting put in by the men with the Federal service had given them insight to labor-saving methods which they readily made available to the packers. By simply following these instructions the packers were able, with a minimum of effort and expense, to maintain their plants within the prescribed standards. Among those listed as holders of the Honor Roll Award is Van Camp Sea Food Company, of San Diego and Los Angeles.

THE birth of a new color process, for photographs that can be used for illustrations in sales portfolios, brochures, and displays, burst across the industry front in a blaze of technicolor that has fairly dazzled advertising and sales executives up and down the West Coast. Not only is the new innovation cheaper by a ratio of 20 to 1; but it holds tremendous possibilities for breaking down sales resistance. While, heretofore, most concerns—not blessed with gorged advertising budgets—were compelled to resort to plain high-fidelity black and white prints, the new method brings the little guy out on top, if not in quantity, certainly in quality.

Bit manufacturers have long used color in the presentation of their products; but it has meant a cost of $20 to $65 per print for fine-screen four-color engraving or lithographing plates, or for individually processed photographs.

Anybody who doesn't think the fish canners have troubles, can just romp along for the next few lines and find out. It was a tossup with several cannery executives whether their reputedly high inventories caused them more headaches than the fact that the City Fathers of their respective cities were trying to chase them from their erstwhile happy homes. Leading off the scrap was a move to shift the High Seas Tuna Packing Company from their spot at the Foot of Canon Street in San Diego, to some dubious spot in the South Bay area of that City. And before this altercation had fairly cooled to the point of touching, the Hovden Food Products Company, of Pacific Grove, California, found their necks in a noose with the City Planning Commission of that City, when they walked innocently into the City Council to ask permission to construct a new building and expand their business. And not long after that, Westgate Sea Food Products Company, back in San Diego, found themselves snarled up in a tangle of red-tape that threatened to oust them from their comfortable spot.

Following in their respective orders, High Seas finally gained, miraculously, an extension of their lease on a virtual month-to-month basis—like renting a two-bit apartment — and settled down again to conduct business. Not so, however, with Hovden. This cannery had been emphatically informed that they were already violating a City Ordinance by operating a fish boning plant within the city limits, and, to say nothing of expanding, stood in a fair shape to get whopped over the head and kicked bodily out of the City. And while two enterprising members of that organization tried diligently to convince the City Council, City Planning Commission, and various other members of the City Government, that they, in reality, intended no real harm, they nearly choked to death in the throes of red-tape. Meanwhile, Westgate, in San Diego, set up on their hind legs and howled. They sued for injunctions against people, the City, and an aircraft company, and things were destined to come to court, and get themselves either straightened out or further enmeshed in the well-known red-tape.

BUT all of these things were of a minor and insignificant nature compared to what happened to a couple of innocent canneries on Cannery Row in Monterey just before the stork brought 1949. A spectacular general alarm fire rattled through the place and gobbled up about $200,000 worth of sardine processing plants. The Carmel plant was completely gutted, including the chilling plant, its holding tanks, the fish house, and the cutting room. More than 20 cutting machines were either destroyed or damaged. Calpack lost their cafeteria, and considerable damage was sustained in the canning rooms. Adding a high element of suspense to the affair was the fact that for a long time the flames threatened to leap into the Custom House Packing Corporation; but 75 firemen, with six pumpers, and some 370,000 gallons of aqua confined the blaze to the Carmel and Calpack plants.

JULY 1949

SILHOUETTES

Jackson, McKinnon, Rosa

AMONG figures looming large across the horizon of the West Coast Fishing Industry, either for past performance, or achievements affecting that industry during 1949, in this writer's eye, is Charles E. Jackson, General Manager of National Fisheries Institute. Sometimes called the "Workhorse of the Fishing Industry," Jackson is a man of many avocations; but he is characterized with a curious singleness of purpose. A hard driving man on the job, he is possessed of a singular tact and diplomacy which, coupled with his thorough knowledge of the mechanics of the fishing industry, has made possible his somewhat spectacular rise to the prominence of his present position as General Manager of NFI.

When he graduated from the National University Law School in Washington, D. C., he launched resolutely into the position of Secretary to Senator E. D. Smith, of his home state, South Carolina. Even at that time his colleagues had criticized him for taking so little time out for relaxation. And while still at his post with the Senator, he was the recipient of two other lucrative jobs, in succession, as Clerk to the Senate Committee on Interstate Commerce, and later, as Clerk to the Senate Committee on Agriculture. With all this work, it became necessary for him to forego his LL.B.; but he was admitted to the bar in the District of Columbia. His practice of law during the next five years was rather overshadowed by such activities as business administration, promotion, advertising, public relations and production, work that he liked and that had been the highlights of his career with Senator Smith.

It was in 1933 that the job came along that molded his destiny, and cast the pattern for the position he holds today. During the next 12 years, he held a series of jobs closely attached to the administration of the fishing industry. The first was as Deputy Commissioner of Fisheries; one of the three American members of the International Pacific Salmon Fisheries Commission; Assistant Director of the Fish and Wildlife Service in the United States Department of Interior; and Assistant Deputy Coordinator of Fisheries. And, at the same time, he served on numerous committees to which he had been appointed in the meantime. And his final resignation to some of these did not become effective until after he had taken over the General Managership of NFI in September of 1945.

Today, at 50, Charlie Jackson is a huge (six-foot, one-inch, 225-pound) dynamo, with pleasant features, a convincing vocabulary, and an honest liking for people. He is the father of two sons and two daughters, the oldest a graduate of the United States Naval Academy, and the youngest an energetic Girl Scout. With his family, he lives in a comfortable home in Chevy Chase, Maryland, has a nice car, and a reassuring bank account, all of which he attributes to giving the best he has to every individual job he holds.

NO other single individual could have more eloquently demonstrated his sincere interest in the West Coast Fishing Industry, than has Clinton D. McKinnon, Democratic Representative in Congress from San Diego, California.

It was a part of his campaign promises, and while some members of the industry may have doubted his sincerity at the time, excerpts from a letter to President Truman made clear his stand in a remarkably short time after his arrival in Washington. Among other things he pointed out to the President, " . . . The Tuna Fishing Industry employes nearly 20,000 persons, represents a capital investment of $70 million, and produces $200 million a year in food and wealth. . . . Tuna was a drug on the market until one of our enterprising Californians found a palatable way to can it and a merchandising system to make it acceptable. . . . Because this group 'sold' the American housewife the delicious flavor, high nutrition, and the value, the United States is practically the only market in the world for canned tuna. . . . But in creating this merchandising miracle—the tuna canning industry sowed its own seed of destruction. . . . With such a lucrative market, foreign canners were quick to move in. Japan—with cheap labor—had no trouble undercutting the market. By 1935 it was dominant, and despite duties, it had the American tuna industry on the ropes. Fishing boats were tied up, canneries closed, and long lines of unemployed added to the burden of our State and Federal governments. . . . Duties and tariffs are not the answer. We found that out in the '30's during the price war with Japan. The labor differential was so great that no matter how high the duty went, there still was no basis for competition. . . . We feel that the proper approach is through a flexible quota system. . . . "

Administrator

Charles E. Jackson, General Manager, National Fisheries Institute, Wash., D. C.

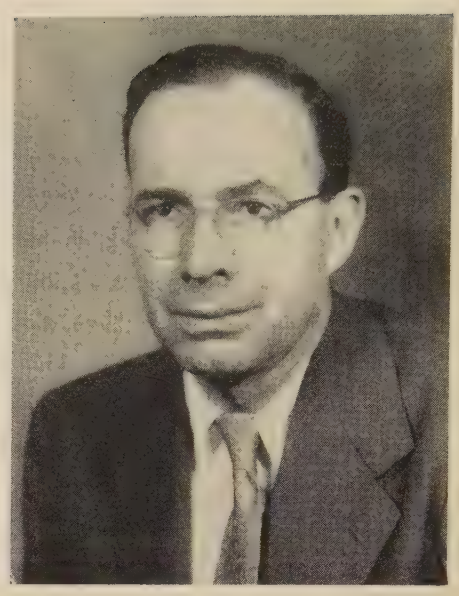
McKinnon was probably closer to the needs of the fishing industry on the West Coast than perhaps any other person outside the industry itself. He was editor and publisher of the San Diego Journal daily newspaper, which he founded. In addition he owned a radio broadcasting station in San Diego, California, which he founded. His close contact with the industry came through the news and his close association with members of the industry in San Diego, which is the seat of the tuna packing industry. Attacking basic problems at the root of the evil in the most elementary manner had long been a characteristic of McKinnon's; and he knew, as did most everyone in the industry, that the great threat to the basic economy of the industry and the price structure of the markets were directly reflected by foreign imports. To eliminate and/or control that evil was to give live-blood to the business.

The result of McKinnon's letter to the President resulted in the appointment of an assistant, John R. Steelman, to investigate the foreign import situation, and brought about a thorough review of the case by the U. S. Tariff Commission.

McKinnon's home is at Pacific Beach, San Diego, California, where he lives with his wife, his mother, and three children, Dan, fifteen; Mike, ten; and Connie, six, in the city where his former newspaper and radio station both still thrive today.

In the world of science, biology, and exploration, men of the West Coast Fishing Industry regard Doctor Lionel A. Walford, Chief, Branch of Fishery Biology, Fish and Wildlife Service, United States Department of Interior, as responsible to a great extent for the tremendous strides accomplished in promoting new fishing grounds. Dr. Walford has been a strict advocate of controlled fishing to prevent the exploitation of our natural resources in the sea. Just what Dr. Walford stands for is probably most graphically portrayed in his recent address before the Fishery Products Conference of the National Canners Association Convention at Atlantic City, New Jersey.

Doctor Walford pointed out that the world population in the nine generations since the Seventeenth Century has increased from 545 million to 2,400 million. Obviously, there is no sign of this condition leveling off, because the increase has been 17½ million in the world since this time one year ago; and the distribution has brought a million and a half of those people to the North American continent. With agricultural



Official

Dr. Lionel Walford, Washington, D. C. biologist. He gave industry something to think of in way of conservation.

scientists working everywhere to make the land produce more food, we have found that the land is not enough to keep pace with the ever-growing human population. And this factor brings into sharp focus the last remaining frontier for additional food resources. But the productivity of the ocean is not limitless, nor either is it constant. While some regions of the sea have remained untouched, most countries have overexploited the most readily accessible areas.

With exploitation done in a designed manner, the resources of the sea could be made to produce on the average, continuously, for the benefit of all people for all time. It was about 80 years ago that scientists recognized that the answer to this problem would come only from a systematic study and understanding of the sea. As a result, came the formation of the International Council for the Exploration of the Mediterranean; the North Atlantic Fisheries Council; and more recently, the Indo-Pacific Fisheries Council. The vast scope of the studies involves research teams working in close coordination, and the help of many sciences — meteorology, physics, chemistry, physical oceanography—and in biology itself it needs many different kinds of talents and specializations: population statisticians, ecologists, bacteriologists, physiologists, systematists.

In the final phase, explanation can best be obtained by quoting directly from Doctor Walford's speech: "Fishery biologists are working along with all the other scientists engaged in food studies to determine how best the fishery resources can be utilized to contribute to the world's food needs. Some

of them are studying well established fisheries to find means of sustaining or even improving the yield by managing the way in which the fishing is conducted by establishing the size of the nets and catch quotas; or by limiting the fishing areas. Others are searching for new fishing grounds or new species of fishes to exploit; still others are improving methods of farming fish or shellfish; finally there are those who seek to increase fish production by improving the natural food supply or other aspects of natural environment.

The story of Manuel G. Rosa, President of the American Tunaboat Association, is the story of a young man who came to this country from the village of Santa Cruz on the Island of Pico, in the Azores. It is a success story of a man who came to a strange country, and could neither speak, read, or write the language of that country, yet who rose to the very top of the field in his chosen profession. Because all of the story cannot be told, it may be that its chief characteristic may lie in the ability of those familiar with the fishing industry to read between the lines. It took Manuel Rosa eighteen months to master sufficiently the language; and a series of jobs in which he had no heart, until he could save enough money to buy a fishing boat and take to the sea in the footsteps of his ancestors.

Before he had left the Azores, he had demonstrated his ability to rise above the ranks, and he had become the youngest skipper of a fishing boat in his native land; so boats and the ways of the sea were no mystery to him. The jobs he held in America included a 'hitch' in the U. S. Navy, and the operation of a small variety store in Sprague, Washington, and later a food market in San Francisco. In the meantime he had returned to the Azores to visit his parents, and it was there he married his childhood sweetheart, Maria Alves. He brought his bride to the United States, and shortly thereafter his brother Antonio Rosa, Manuel's brother came to San Diego. It was in 1923 that Manuel had finally accumulated enough money to buy a fishing vessel. He settled on the *Peerless*, then the largest boat in the fishing fleet there.

Following two years of successful fishing with the *Peerless*, Manuel saw prospects of great profits with additional boats, and he went into a partnership with his brother and built the 108-foot *Lusitania*. In those days this boat was the last word in fishing equipment. Today Manuel describes the *Lusitania* wryly when he considers the modern equipment that adorns his newer clippers; but then it was a definite step forward. Manuel's brother Antonio returned to the Azores to stay; but Manuel climbed forward, and in 1923 he expanded again his fishing fleet to include the *Belle of Portugal*, *Picarota*, and the *Azorena*, and the latter became the largest boat in the San Diego fishing fleet.

Then the War came along and the U. S. Navy commandeered Manuel's boats, leaving him only the *Lusitania*. With but one boat left and fishing to be done, Manuel threw the *Lusitania* on the ways and had her lengthened nine feet, made two feet wider, and two feet deeper. With the shortage of boats in the fishing fleet, he could have sold the *Lusitania* at a handsome profit before the alterations were completed; but Manuel intended to stick to fishing. With the end of the War he got his boats back, but he had retired from active fishing by then, and his son Alvin took over as skipper of one of his five tuna clippers.

Today, Manuel Rosa is considered one of the wealthiest men in the tuna fishing fleet. His love of the sea has prompted him to buy a yacht, called the *Rosa M*, in which he plans someday to cruise the fishing waters at leisure. In the meantime he lives in a mansion-like residence in San Diego, with his wife, son Alvin, a daughter, Mary who is presently striving for a career as a physician, and goes to the job daily as President of the American Tunaboat Association.

Official

Dr. Wilford Chapman, Special Assistant to Undersecretary of State, Washington, D. C. A strong treaties advocate.

It Was Red!

By Fannie Hurst

When I was a child, a certain incident made an impression as red as blood across my memory.

As a matter of fact, it was blood!

A neighbor of ours, who lived in a large house down the street, once explained to my flattered mother that she enjoyed having me visit her, not only because she had no children of her own, but because I was precocious and more interesting than many an adult. Be that as it may, I enjoyed frequenting her house, which was larger and finer than ours. There I was permitted to browse among her books. Chocolate creams and cookies were always in delightful evidence. Sometimes our neighbor, who was interested in china painting and water colors, took me on expeditions to the park where she set up her easel, or on visits to the local art museums. One day when we were walking through the St. Louis Museum of Fine Art, my friend had a sudden coughing spell. When she removed her handkerchief from her lips, it was red!

I cannot forget the long transfixed moment of her wide-eyed stare before she resumed as if nothing had happened. But something had! Something had happened to her and to me. I, too, had reason to know that red signal. In our town tuberculosis was no stranger. But in those days we had not been educated to recognize early stages of tuberculosis and to outsmart the killer. Neither had science organized itself against it on today's scale.

Tuberculosis, which was to kill my friend 10 months later, had crept unrecognized upon her.

Today, the war on TB, led by the National Tuberculosis Association, has succeeded in cutting the death rate by 85 per cent since that day back there when my sweet neighbor had the coughing fit in the Art Museum. It may sound far-fetched, but the fact is, that those little Christmas Seals which you purchase annually have played a vast role in the advances made by science in the direction of the control and cure of tuberculosis. The National Tuberculosis Association and its affiliates, in cooperation with the U. S. Public Health Service and other agencies, has educated and alerted the public. Science ferrets out the subtle and elusive facts, and they are rapidly translated to the public in terms it can understand. TB is caused by germs. Germs are spread by people who have "open" TB, but precautions can be taken to prevent the spread. TB CAN BE CURED—if discovered in time! TB can be discovered early by means of a chest X-ray. If only my neighbor had discovered it in time—before that red day in the Art Gallery! Christmas Seals, which we can buy with little more than odd change, have spread the priceless tidings! TB can be cured—if! And yet, ironically, tragically, Mr. and Mrs. Average Citizen have to be wooed, propagandized, coaxed, to buy Christmas Seals. Here is a disquieting thought about you and me.

Once we multiply the individual by hundreds, thousands or millions, his identity eludes us. The moment we become statistical, we lose reality. Our imagination falters in the face of figures. One million sick, infected or starving children in Europe, is a headline in a tossed-aside newspaper. One stricken child on the block is a matter of concern to everybody in the neighborhood. Tuberculosis is our catastrophe and national plague. Its statistics are irrefutable. But until TB strikes home, or the neighbor next door shows red on her handkerchief, or some one precious in the home is stricken, it remains something that can happen to the other person. Not to us. To that impersonal "other child." To that poor little faceless statistic.

That frame of mind is our peril. With half a million people in the United States estimated to have active TB, with almost fifty thousand Americans killed by it this year, with its causing more deaths among persons between 15 and 34 than any other disease, TB continues to be one of our arch enemies! It behooves America and Americans to give these statistics faces and identities. With frightening frequency, they add up to your face and your identity. One way of helping to defeat this age-old enemy, tuberculosis, is by being generous in our purchase of Christmas Seals to support the work of the National Tuberculosis Association and its 3,000 affiliates.

(The largest public health program ever attempted in California got under way on Dec. 6—the San Diego Metropolitan Mass Chest X-Ray Survey. Aimed at X-raying, at no charge to the individual, the chests of some 300,000 San Diegans, the program when completed will enable health officials to draw a comprehensive picture of the tuberculosis problem in the San Diego area. The survey is being sponsored by the County Medical Society, the U. S. Public Health Service, the Department of Public Health, the Tuberculosis and Health Association and the California Department of Public Health. President of the non-profit corporation which is sponsoring the program is Hance H. Cleland, outstanding local civic leader for many years. The San Diego area, scene of the survey, has been divided into 18 districts. When the actual X-raying began eight mobile and 11 portable X-ray units, loaned by the U. S. Public Health Service, started operating simultaneously throughout these districts.

Long before the Dec. 6 opening date, health officers, survey staff workers and volunteers began working out the multitudinous details essential in planning an undertaking of this kind. Survey staff members organized the districts for X-raying. Various committees were formed with chairmen appointed by Cleland. Perry W. Metcalf, designated chairman of the Business and Industry committee, took charge of the organization of District 18, the downtown area. His job was to contact all large businesses employing 100 or more persons by means of zone and block workers and arrange for their X-raying.

Industries with comparable payrolls which were located outside this district also came under the committee's jurisdicion. City, county, state and federal offices were included. Hospitals and institutions also were contacted and arrangements made for the staffs and ambulatory patients to take advantage of the free X-ray. The Hostess committee under direction of Mrs. Glen Iverson obtained the assistance of persons from men's and women's club in the San Diego area. Members of these clubs are

(Continued on page 53)

The GLOBE

An International News
File compiled by
FOREIGN BUREAUS
of
Marine Press Association

San Jose, Costa Rica.—The Government of Costa Rica has promulgated Decree-Law No. 739 of October 4, 1949, published in the **Diario Oficial** of October 8, 1949, and effective as of that date, which modifies Decree-Law No. 363 of January 11, 1949, and revokes Decree-Law No. 414 of February 4, 1949, both concerning rules and regulations for the fishing industry, according to a dispatch from the American Embassy, San Jose.

Article 1 of Decree-Law No. 739 revokes certain provisions of Decree-Law No. 363, as follows:

Article 19 (Decree-Law 363) which required national craft to obtain a permit to sell their product abroad and to pay the required export taxes.

Article 20 (Decree-Law 363) which provided certain exemptions for fishing craft of national registry.

Article 25 (Decree-Law 363) which required mother ships, factory ships, and land plants to submit certain information about their purchases of fish.

Article 28 (Decree-Law 363 modified by Decree-Law 414), which specified taxes payable for fishing for shark and tuna.

Article 28 (Decree-Law 363 modifie dby Decree-Law 414) which specified the tax to be paid by bait-fishing craft.

Article 30 (Decree-Law 363 modified by Decree-Law 414) which specified the export taxes to be paid on shark and tuna.

Article 2 of Decree-Law No. 739 modified certain provisions of Decree-Law No. 363 as indicated:

Article 9, -1): Permit must now be obtained to fish for sardines in territorial waters. Periods and zones in which such fishing will not be permitted will be published 90 days in advance in the Diario Oficial.

Article 9, -2: Forbids fishing or hunting of porpoise, and adds the provision that when porpoise are caught they should be returned to the sea alive if possible.

Article 9, -3: Forbids the use of explosives, chemical or poisonous or other noxious methods, or the use of unauthorized equipment for and systems ot fishing.

Article 9, -4: Forbids the use of drag nets or purse-seine nets, except those operated from land or used for fishing for sardines or anchovy, in areas designated by the Ministry of Agriculture and Industries.

Article 10: Change made in entities which shall obtain fishing permits and states that they shall be issued after fishing taxes have been paid.

Article 13: Only section of the article has been changed. It now provides that the use of drag nets or purse-seine nets, except the use of drag nets from land and for the fishing of sardines and anchovy; within the area determined shall be considered a serious offense.

Article 14: The law now provides that fines must be imposed by the courts. All fines are payable in colones. Offenders may be arrested. For repeated offenses the corresponding fines may be doubled: other provisions deleted.

Article 17: Officials of the Fisheries Offices shall report infractions of the rules and regulations to the authorities competent to deal with them.

Article 26: Under certain conditions the taxes shall be paid to the Ministry of Economy and Finance.

Article 27: The new article actually replaces articles 27 (Annual Registration Fee), 28 (Fishing TTax), 29 (Bait Tax), and 30 (Export Tax) of previous legislation. It replaces the four taxes established by those articles with a single one based on gross tonnage. It also assesses a tax for the transfer.

Article 31: Fisherman's tax of $2.00 is established. Residents of Costa Rica may pay the equivalent in colones.

Article 3 of Decree-Law 739 provides that leaving fish products and waste on the beaches or shores or throwing them into the sea at a distance less than three miles from the coast shall be added to the list of minor infractions of the Rules and Regulations as listed in Article 12 of Decree-Law No. 363.

Article 4 of Decree-Law 739 revokes Decree-Law No. 414 of February 4, 1949 which modified Decree-Law No. 363 of January 11, 1949.

Article 5 of Decree-Law No. 739 states that the decree is effective from the date of its publication (October 8, 1949).

Bremerhaven, Germany.—The inventors of the German electric fishing device described in a previous issue of Pan-American have been given the sum of DM 80,000 (approx. $19,048) from the so-called Ausgleichs-stock to complete their tests, according to a report from the American Consulate at Bremerhaven. Reports state that the inventors told the German fishing industry that they had received offers from the United States which they would accept if adequate funds were not forthcoming from the German industry.

Oslo, Norway.—The Norwegian central export sales agent for all fish freezing factories in Norway is optimistic regarding the shipments of frozen fish, according to a report from the American Embassy at Oslo. Regular deliveries have been made to France, Switzerland, Austria, Italy, Czechoslovakia, Western Germany, the Netherlands, and Sweden, with prospects of shipments to Israel. A distributing agent has been appointed in the United States and an increase in sales due to devaluation is anticipated.

Mexico City.—In accordance with a decree published in the Mexican Diario Oficial of October 22 and effective three days after publication, the export tax on certain fishery products has been modified, according to a report from the American Embassy at Mexico, D. F. The export tax tariff is modified by this decree so that Fresh or Frozen Fish, Unspecified (11-01) is now 3 centavos (approx. 0.35 cents U. S.) plus 10 percent ad valorem per net kilo (2.2 pounds); and Fresh, Raw, Dried or Peeled Shrimp (11-11) is now 30 centavos (approx. 3.5 cents U.S.) plus 10 percent ad valorem per 100 net kilos.

The MACHADO TEST

The "Hiller 360" Helicopter's Performance Aboard the Espirito Santo Has Southern California Waterfronts Talking

(When burly Joe Machado, Captain of the big clipper, *Espirito Santo*, out of San Diego, California, took off for the fishing banks with a helicopter aboard, the waterfront could hardly wait until he returned, in order to find out just how much good the plane did him in the catching of fish. Last month, when he got back, it found out. Here's the dope.)

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By STUART ALTON
Marine Press Contributing Editor

LAST month a development took place in the commercial fishing industry of Southern California that could revolutionize, given a little time and application, the entire method of catching deep-sea fish for market purposes. The innovation involved use of a helicopter, and was tested, with complete satisfaction, on a trip aboard the giant clipper, *Espirito Santo*, skippered by San Diego, California's big fisherman, Joe Machado.

Out 88 days, Machado and his crew came into port with 490 tons of prime fish, most of it caught around the Galapagos Islands. "The 'copter," said Machado, "shortened our trip by about a month, and I predict that this type of plane will become regular equipment on the bigger ships very soon." About 100 tons of the fish caught, Machado estimated, could be laid directly at the door of the plane.

"Thanks ot the 'copter's scouting," Machado said, "we were able to work three or four schools of fish at once." Equally enthusiastic over the use of 'copters in fishing was John George of San Diego, a spotter. George referred to the limited range which hampers spotters in the crow's nest of a vessel, and recalled that the *Espirito Santo* had passed within 200 feet of a large school without even seeing the fish. Tipped off by the helicopter's pilot, who was making the test at the request of Van Camp Seafood Company, Terminal Island, California, the ship turned about and caught a 22-ton haul.

"I was somewhat surprised," said H. R. Watson, the pilot, "at the ease with which we were able to spot fish and bait. Schools of porpoise, in particular, are a cinch to locate from the air. This, of course, makes the taking of bait many times easier over the old method of ferreting it out from aboard ship." And among other advantages, it developed that:

The Hiller 360 (which was the 'copter used for the test), could range so far as 150 miles, and, moreover, could be equipped to range so far as 420 miles. This not only rebounded to a clipper's good so far as fish were concerned, but also repreesnted a great saving in ship's fuel, in the plumbing of weather conditions, and as a safety measure for crew members who, if injured, could be flown out to a hospital or doctor. More, the cost of the Hiller 360 was about two to five per cent of a ship's original investment, or, to be more specific, $19,995. The cost, some observers estimated, could be dissipated, due to the saving in time and fuel needed for a full load, in a couple of trips. Both the plane itself and the company manufacturing it, had something more than an interesting background.

For one thing, the Hiller 360 Utility Model got the first type certificate issued by the Civil Aeronautics Administration to an exclusive manufacturer of helicopters. This certificate established that the Hiller 360 had met the exacting standards for rotary-wing aircraft set up by the United States Government. Production of the Hiller 360 is being expanded as rapidly as possible in United Helicopter's new Palo Alto plant to meet the growing demands of agriculture, industry and commerce.

The unique feature which distinguishes this new craft from all other helicopters is the simplified control system. Basically, this system consists of an overhead control stick connecting through a simple linkage to a servo-control rotor. The overhead control stick eliminates all of the cables, pulleys, and levers found in conventional

(*Continued on page 48*)

Participants

Talking it over on deck of the *Espirito Santo*. Left to right: Tom Vaubel, mechanic, Joe Machado, skipper, H. R. Watson, the 'copter's pilot, and Langhorne Washburn, Operations Manager, United Helicopters, Incorporated, Palo Alto, California.

Press-O-Grams

GOOD JOB AND CONGRATULATIONS

Westgate Sea Products Company of San Diego, California, has long been noted for its farsightedness, and a current move is no exception to the rule which, as a matter-of-fact, was laid down by none other than the late Wiley Ambrose, founder of the firm. In this best tradition then, Westgate, some weeks ago, dispatched George Stevens, skipper of the *Carol Virginia*, and Gail Whitworth, a crew member, on a trip covering the major cities of the East and West. The information Westgate wanted, of course, was what was being done in the way of marketing tuna in grocery stores, how the buyers felt about the product, and what these gentlemen actually knew about the Border City's sprawling industry. The firm couldn't have picked two better men for the job. Both Whitworth and Stevens were ex-grocery salesmen; they know the questions that needed answering, and they found out.

"The most amazing part of our conversations with these people," related Stevens, "was that they had absolutely no conception, in the main, as to what the tuna industry amounted to. Most of them were astounded to discover that many of our ships cost a half-million dollars and that we are gone from home port for as many as four months at a clip.

"Another thing we found was that in cities such as Detroit, foreign-packed bonito was selling as low as eighteen cents a can, and, moreover, that even American tuna in many stores is selling as a staple item, such as flour, canned milk, butter, and so forth. This means that these stores are using tuna as a sort of leader, often not making a cent on the item. Some stores were retailing our leading brands for three for a dollar."

Stevens said the so-called chain stores were doing a good job in putting over canned tuna to the public, and that their methods could be studied with effect by smaller grocers. He emphasized the importance, however, in keeping the "ball rolling" in the matter of advanced advertising and publicity of the product.

"Industry-controlled advertising is the number one answer, I believe," he said. "The product is certain to enjoy an increasing sale, due to its public-acceptance, but the tempo could be considerably accelerated by an overall national advertising program."

He found, Stevens said, the prices on imported fish "ridiculously low," and repeated that American brands should be dinned into public ears. "Now, if ever," he said, "is the time to plug American-packed fish by American standards of quality and cleanliness. We cut a few cans of the imported stuff, and found it absolutely nowhere near the quality of our domestic brands. This information should be hammered into the public at once, as American people basically, are quality buyers. To illustrate once more how little the grocer even knows about tuna, many of them thought the fish was canned aboard the boats." The Stevens-Whitworth junket embraced such cities as Richmond. West Virginia; New York City; Memphis, Tennessee; Birmingham, Alabama; Detroit, Michigan; Cincinnati, Ohio; Denver, Colorado, and five others.

WELDED ECONOMY

In May of this year, a group of about thirty small boat owners got together a corporation called San Diego Commercial Fishing Boat Owners, Incorporated, with the purpose of representing the "small man" in matters pertaining to their industry. They worked fairly quietly, preferring to throw their voices en masse where it would do the most good, and upon subjects that merited attention, rather than in mere sound and hooey. Last month, with their numbers about doubled, they proved that they knew how the picture lay, and what should be done about it. The incident concerned a meeting in Marlin Inn, Point Loma, the organization's headquarters, and, to embellish the proceedings, they asked San Diego Congressman Clinton D. McKinnon to step in for a summary of the import quota system.

Before the confab was over. McKinnon had plenty of information at his fingertips, and the facts to back it up. McKinnon agreed that the Tariff Commission had to be be-deviled over the situation, and that it was going to take plenty of hard work. Then he asked for the opinion of the group on subjects such as treaties, subsidies, etc. This the group agreed to provide, which, in the words of McKinnon, was plenty "gratifying, and means to a program for me to work on." In this, of course, he was referring to a program suggested by the individual group. He'd already proved that he knew what the score was regarding the quota system on imports suggested by the industry some time

(Continued on page 49)

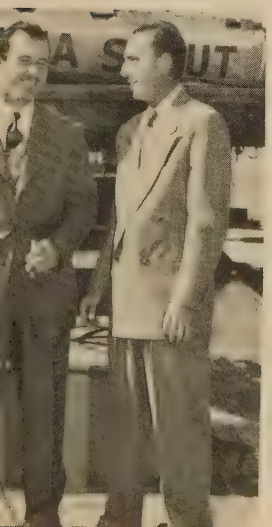
Second-Grade Junket

Last month parents of the second-graders of Brooklyn Grade School, San Diego, California, prevailed on officials of High Seas Tuna Packing Company to take them through the plant. The lady in the center, with the young man on her arm, is Mrs. Frank Aufdenspring, sponsor of the trip. The young man is "Gee," who, along with his sister, Kathie, made the trip with more than a little interest.

NEW EYES
For the Industry

THE "HILLER 360"

"Hiller 360" Tuna Scout shown aboard its base on the bait tank canopy on the stern of the Tuna Clipper Espirito Santo.



Joe Machado, enterprising skipper of the tuna clipper, Espirito Santo, praises the Hiller 360 Helicopter, to its pilot, H. R. Watson.

Says Machado, "The Hiller 360 played an important role in the big catch we brought in last week. It has certainly proved its worth to the fishing industry in saving fuel, time at sea and man hours.

"The 88-day cruise to the Galapagos Islands was shortened by at least a month because of the 'copter's work. The clipper was able to work four or five schools of fish a day, because of the operation of the helicopter."

The easiest-to-fly and easiest-to-maintain helicopter ever marketed, the "Hiller 360" Tuna Scout is equipped with pontoons for deck or water landing and a two way ship to scout radio. With its ability to operate directly from the ship under almost any weather and sea conditions the "Hiller 360" Tuna Scout has proven itself the most modern fishing aid yet developed; available for service 24 hours per day.

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EXTEND

Holiday Greetings

To our many friends in San Diego's illustrious fishing industry, we wish all, a very Merry Christmas and a prosperous and Happy New Year with calm seas and full nets.

DOWN MELODY LANE

with

Jack McLean

IN SAN DIEGO

Top's
RESTAURANT
TOPS
IT'S Top's FOR DELICIOUS FOOD
DELICIOUS FOOD
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MOST OUTSTANDING DINE & DANCE RESTAURANT IN SO. CALIF.
Specializing in Kansas City Corn Fed Beef
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ATTENDANT AT ALL HOURS
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3 BLOCKS NORTH OF PACIFIC SQUARE
VISIT TOPS ORIGINAL BLACKOUT COCKTAIL BAR

"Bunny" COFFIELD

Host and Manager

Says Bunny: "The gay holiday season is here again and whenever you are ashore we shall do our utmost to make every evening you spend with us, a gay and happy holiday. And don't forget the MODERNAIRES who will be with us starting January 2nd."

EBB 'N FLOW

THE INDUSTRY

The Ambrose-Crivello Answer:

Late last month two vitally significant developments took place in San Diego, California. The first, and perhaps the one of secondary importance in the long run, was the out-of-court settlement between Westgate Sea Products Company and Solar Aircraft Corporation, also of the Border City. Westgate, so the decision went, agreed to move from its present tidelands location in return for payment by Solar for buildings and improvements erected on the site since 1919. Both concerns agreed to drop litigation growing out of Solar's demands that Westgate vacate, a demand that Westgate had resisted in court, with the contention that the city Harbor Department's lease entitled it to the cannery's location by November 1. Then came the bombshell. Creation of a new company from the present Westgate Sea Products Company and Sun Harbor Packing Company was suddenly announced. The new firm, to be known as Westgate-Sun Harbor Company, will start business about January 1 as one of the largest packers of tuna in the Southern California industry. Merger of the two major packers unites executive personnel from each of the canneries. Executives of the new firm will be W. Wade Ambrose, president; Jack Crivello, executive vice-president; K. J. Berglund, vice-president for finances; James B. Lane, vice-president for sales; Carl Edwards, secretary; E. W. Sindelar, treasurer; Marvin Loughbom, sales manager for Sun Harbor Company, a separate sales division; Andrew Sanfilippo, production superintendent; and Harold Requa, Jr., advertising and public relations director.

Ambrose and Crivello will have equal administrative authority. Crivello, Berglund, Sindelar, Sanfilippo, Loughbom and Requa are now affiliated with Sun Harbor while Ambrose, Lane and Edwards are Westgate executives. An executive committee will be composed of the new president, executive vice-president and two vice-presidents. The firm's board of directors will consist of the executive committeemen and Louis J. Rice Jr., First National Bank executive; Raymond M. Wansley, attorney and tax consultant; and Fred Kunzel, attorney.

The Location:

Production will center in the present Sun Harbor Packing Company plant. Plans for expansion of plant facilities and executive offices already have been drafted and construction is expected to get under way soon. The William R. Staats Co., of Los Angeles, was engaged to act as advisors in working out details of the merger. The transaction uniting the local canneries assures retention of Westgate in the San Diego area. Termination of tideland leases now held by Westgate posed the possibility of this major firm being forced to leave Southern California and seek a site elsewhere in the United States. Westgate Sea Products Company a pioneer in the industry, has long been the home of famous "Breast-O'-Chicken" tuna. This label has been known to consumers throughout the nation for a quarter of a century. Ambrose has long been active in the National Fisheries Institute and the National Canners' Association and has been among the industry's leaders in the recent fight to obtain quotas on imported products threatening to destroy the domestic tuna industry.

Up From Obscurity:

Sun Harbor Packing Company, from a meager 100,000-case production capacity 10 years ago, has grown to one of the major leaders in tuna output. Its large fleet and extensive production facilities resulted from an unusual growth under the leadership of Crivello and now produces more than a million cases annually. Uniting of the local concerns represents the largest single transaction in the tuna industry's history. In a joint statement. Ambrose and Crivello said: "The formation of the new company will have a stabilizing influence on the tuna industry. It combines a company which has enjoyed the largest growth of any tuna firm in the past 10 years and one which has a well established label noted for its quality."

SAFER SLEDDING

Happy Record:

The sea is getting safer according to reports from that famed fishing port, Gloucester, Mass. There wasn't a single fisherman from that port lost at sea during 1949. This was the first time in 58 years that some Gloucester family hadn't suffered a loss of one of their number to the sea, during the year.

THE HIGH SEAS

Payloads:

Clippers and fishers returning to San Diego, Calif., from southern waters last month reported excellent catches, in almost every instance full tanks. The tuna clipper *Normandie* came in with 450 tons fished off the Galapagos Islands. Others making hauls in the same area were the *Sun Jason*, *Renown*, *Sun Dora* and *Commodore*. The combined catch of the five craft was in excess of 1500 tons. Seven tuna clippers returning from the same area a few days later registered

(Continued on page 51)

Exhibition

When the kids of the Kiwanis Day program got a chance to go aboard a tuna clipper recently, they didn't miss. Here Bob Peres shows a group of them how its done. (See "Ebb'n Flow" on page 56).

SOUTHERN
CALIFORNIA
Fishermen's Association
EXTENDS

Sincere Season's Greetings

to the

Fishing Industry

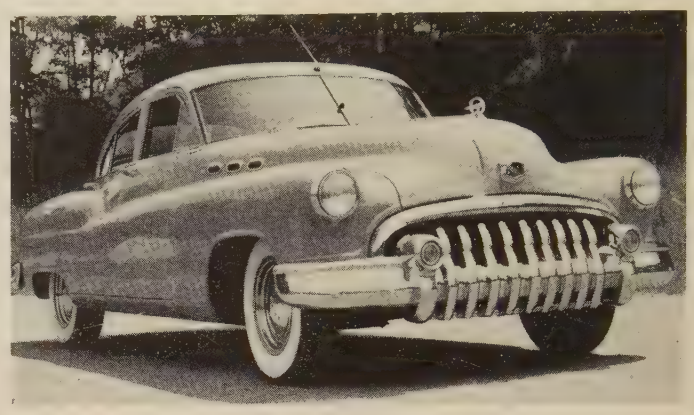
and its

MEMBERS

Southern California
FISHERMEN'S ASSOCIATION
418 Harbor Lane — F-7371
SAN DIEGO, CALIF.

You'll Be "Out Front" in the New

BUICK "Special"



Yes, the new Buick Special is out front, challenging even the lowest priced eights as the biggest buy of the times. Delivered here for as little as $2097.

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Top Quality
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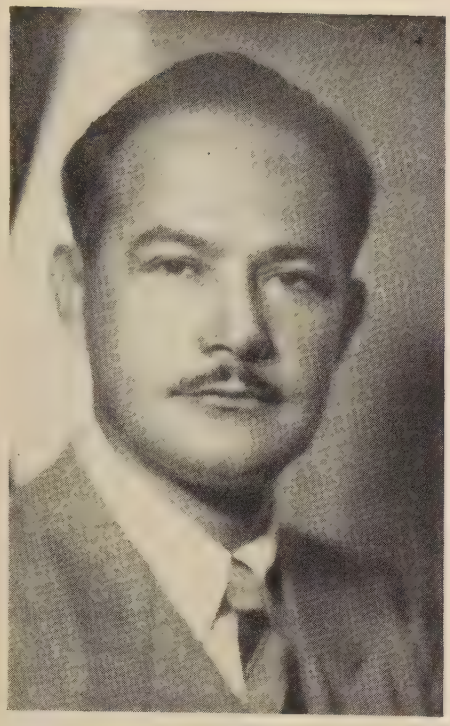
MEXICO!

What Part Will Fishing Play In Her Future?

(Part Three)



Leader

Hector Ferreira, one of Mexico's most astute fisheries executives. Ferreira rose from comparative obscurity to a position of top rank within a few years.

THERE are, generally speaking, two markets for the Mexican fishery catch, the United States and the domestic market, principally on the Central Plateau. Most of the catch in Pacific waters is either taken to the United States on the same boats on which the fish were caught, or landed at Guaymas and shipped by rail to the United States through the ports of Nogales or Mexicali. Pacific Coast fish products not exported are usually sold to the canning or packing concerns located at different points along the coast. A certain amount of fresh fish is shipped in ice from Mazatlan to Guadalajara by rail, with a smaller catch being shipped from Manzanillo to Guadalajara and Mexico City. The lagoon catch of southeastern Oaxaca and Chiapas is shipped to markets in the city of Oaxaca by truck or rail.

The canned fish products from Lower California destined for consumption in the interior of Mexico are transported by water to Mazatlan or Manzanillo and thence by rail to Mexico City and other centers. The Gulf Coast catch, a greater percentage of which is consumed within Mexico, is delivered to the interior by two routes of transportation, refrigerated truck and rail. Fish taken at Tampico and in the Tamiahua region are now almost all transported to Mexico City in refrigerated truck, the rail route being longer and slower with greater danger of spoilage.

The largest movement of fresh fish is from Veracruz to Mexico City and the transportation facilities are relatively fast with both rail and highway being used. Fish from Alvarado, Tlacotalpan and Coatzacoalcos are shipped fresh or salted by rail to Mexico City and other points. Wholesale fish houses in Mexico City handle the catch of certain regions or cooperatives, delivering the fresh fish to retail outlets, hotels, and restaurants. Inasmuch as the fish catch is seasonal, the price on the retail market varies considerably throughout the year. There are no special taxes on wholesale or retail marketing of fish products and as far as can be ascertained there are no price or marketing agreements. The Mexican Government made an effort to help fishermen through the organization of fishing cooperatives, which were intended to provide not only collective bargaining but a general betterment of working conditions. Numerous decrees have been issued for the protection of cooperatives and two affecting the production and marketing of fish are as follows:

(1) To conduct commercial fishing for abalone, shrimp, squid, lobster, mullet, oyster, octopus, Gulf pike, and Mexican sea bass (totoaba) in general and for sea bass (cabrilla) and sea trout in the Gulf of California north of the 27th parallel, a contract-concession is required. These concessions are granted only to fishermen's cooperative societies duly authorized and registered in accordance with the cooperative laws.

(2) A subsidy amounting to 100 percent of the amount of the production tax of 1.00 peso per kilogram is made to fishing cooperatives on the following fishery products: abalone, clam, sea bass (cabrilla), squid, sea trout, lobster, crawfish, oysters, octopus, and Mexican sea bass (totoaba).

There has been in recent years a marked increase in the number of freezing plants and an overall improvement in freezing procedure. There has also been considerable advance in the types of boats and technique used in the shrimp fishery. Other fisheries have shown little advance in technology, organization, and financing since prior to the war and for the most part fisheries, other than shrimp, California sardine, Pacific mackerel and abalone, are being worked under relatively primitive conditions.

Although some research has been made on fresh water fish, there has been no such activity in the case of Mexico's important marine fisheries, with the possible exception of shrimp. As a result of this lack of investigation the fishing industry is often conducted wastefully and many regions which formerly abounded in valuable fish species have been fished out. As a rule, Mexican fishermen have had no education or training in fish conservation and as a result the industry probably wastes as much as it produces, with the corresponding depletion of valuable resources.

OUTLOOK SUMMARY

The Mexican fisheries industry is exploiting only its luxury export fisheries on a near capacity basis. Non-luxury or inexpensive fish are not being caught in any degree comparable to their abundance. Inasmuch as a sound fisheries industry is primarily based on the exploitation of the inexpensive fish populations, it is obvious that Mexico must solve this problem in order to realize its full possibilities as a fish producing nation.

The future for Mexican luxury fisheries, such as shrimp, is promising and appears to be growing substantially through more modern methods of exploitation. However, it is doubtful if the present apathetic attitude toward the development of domestically consumed fisheries will change in the forseeable future.

The following factors are directly responsible for the present inability of Mexico properly to exploit its non-luxury fishery resources with the consequent extremely low per capita consumption:

(1) Lack of adequate fishing boats and gear.

(2) Fishermen need training and education.

(3) There are no liberal credit facilities for fishermen.

(4) Adequate refrigeration facilities are lacking at points of debarkation of catch.

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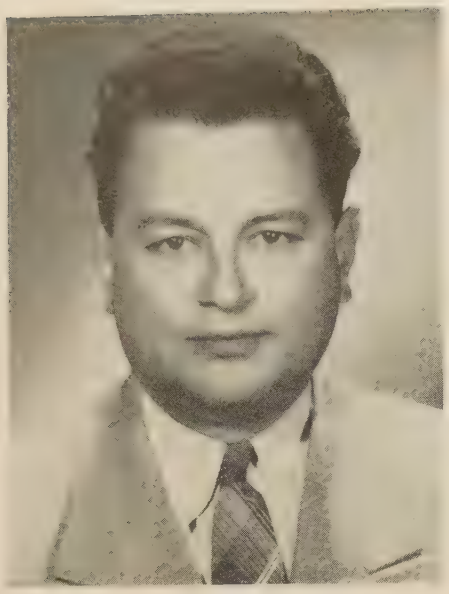

Leader

Roberto R. Cordova, Gerente, Pesquera Peinsular, Ensenada, Baja California, Mexico. Still a young man, Cordova has become one of the industry's outstanding figures.

(5) Principal consumption centers need cold storage facilities in order to avoid seasonal fluctuations in supply.

(6) Many fishing areas are now isolated for lack of rapid low cost transportation.

(7) Scientific investigation is required to increase present fisheries and open others.

(8) Rigid control of fishery resources is needed for the preservation of productivity.

The import requirements of Mexico have been declining since 1946 and it is probable that the record imports of over 1.5 million dollars registered for that year will not be repeated in the near future because of the present dollar shortage being experienced by Mexico. It is believed that imports in the future will be limited to the staple consumption items such as codfish and sardines.

As has been apparent in the discussion of Mexican exports, almost all luxury fisheries are exported in their entirety and thus at least 95 percent of the production of shrimp, abalone, and lobster may be considered exportable surplus. By proper exploitation it is possible that large exportable surpluses of such fish as snapper, Gulf pike, Mexican sea bass, Pacific mackerel, and California sardine could be obtained but this is speculation which only the future can confirm.

THE day cannot be far off, however, when these conditions will change, and one reason is the high type of businessman which this industry has brought to light in Mexico. Indeed, these figures are adding to their numbers almost daily. It began, of course, with the development brought about by one of the keenest business heads in the world today. He is General Abelardo L. Rodriguez, former President of Mexico. Certainly the Pacific fisheries of Mexico, and the thousands of persons currently living and profiting from them, owe a great debt to his public spiritedness and relentless leadership. Rodriquez' farsightedness and astute business management, naturally, had made him a wealthy man long before he became interested in the commercial fishing industry of his country. But when eventually he became intrigued by the possibilities of the operation, things began to change overnight. For one thing, his entry of the picture which, in the beginning was an honestly "socially conscious" gesture, changed the living standards of many of his people to a point wherein he is virtually credited, in many circles, with actually effecting a financial reform in Baja California.

Rodriguez began by wresting control of the shrimp fishing industry from the Japanese, who, prior to 1940, had controlled this enterprise along the Coast and Baja California. In this action, he had laid his groundwork well. During the years in which the Japanese had dominated this industry, he had been quietly training scores of young men of Mexico, in the learning of the business. These men, who later were to become the heads of Mexico's great fisheries plants, knew their stuff when, in September, 1940, Rodriguez went into action. During that month, the government of President Cardenas announced that the Japanese concessions would be renewed, as the Japanese, some of whom were entrenched in powerful political spots, had anticipated. But they reckoned without Rodriguez as, at the ninth hour, Rodriguez showed up in Mexico City and offered to finance and direct the bulk of the Mexican fish industry. There followed months of haggling, and, when the Japanese attacked Pearl Harbor, the deal was closed. Rodriguez then went to work. He largely financed a fleet of fishing vessels, constructed the first shrimp freezer at Guaymas, and set up the present system of cooperatives. He also backed boat companies, to provide better equipment for the fishermen, stepped up systems of supply, and backed various ships' chandleries. His *cooperativa* system, which means that he would financially back a likely young executive, (or executives), turn over the business control and then turn to another enterprise, was an immediate success. This method, of course, has made more than one of his neophytes wealthy and influential and, in turn, has provided a decent living for thousands of people. It has, in fact, turned up such successful and influential businessmen as Hector Ferreira of Guaymas; Romeo Cabral of Tijuana; Francisco A. Morales, Jr., of Ensenada, Hernando De Cima of Guaymas; Gabriel Milhe, Jr., of Guaymas; Louis Cabrillo of Guayamas; Roberto R. Cordova of Ensenada; Pancho Alvarez of Ensenada, and many others. Their histories and the successes each has achieved is the actual fishing history of Mexico, and one of that history's brightest stars is Hector Ferreira, who, as a matter-of-fact, is no longer associated with Rodriguez, but who was associated at one time with the General.

A pioneer in Mexico's fishing picture, as in the case with the others, Ferreira today is owner and manager of the platinum Pesquera E. Industrializadora de Guaymas, S. A., and President of the Pacific Fishery Institute of Guaymas. This latter organization is also composed of key leaders of the industry, and, in its functioning, resembles the National Fisheries Institute of the United States.

Ferreira's career started with his entry of the fruit and vegetable packing business in Hermachio early in 1932. From there, in 1936 to be specific, he moved to Guaymas and went into the oyster-packing business, during which he expanded to Topolobampo, Sonora, and got into the shrimp-packing swim. This was in 1939, when he was 36 years old, and it was about this time also that he began to be noticed as one of

(Continued on page 50)

Fishers

Mr. and Mrs. Tom Jamison of Guaymas, and an unidentified employe, (left to right), watching the launching of the Jamison's newest sport fishing boat, *Miramar*. The Jamison's also own and operate the *Pride of Guaymas*, guarantee fish every trip.

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GENERAL AGENTS

TACOMA SEATTLE PORTLAND SAN FRANCISCO LOS ANGELES

Pacific Mackerel

Tagging Experiments

(Part Six)

(Here is the sixth in the series of Mackerel Tagging Experiments written by Donald H. Fry, Jr., and Phil Roedel, California Division of Fish and Game. The previous installment ended: "It never proved productive to tag when the fish were being battered in the bait tanks, or when the tagging crew could not find secure footing or was plagued with seasickness.")

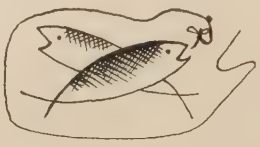
THE 19 tag lots finally adopted include 37,319 individuals and represent five geographical areas. The bulk of tagging was accomplished in three of these areas which correspond to the grounds most heavily exploited by the scoop fleet. These are Santa Catalina Island, Santa Monica Bay, and the Newport region, this including the mainland coast from San Pedro to San Onofre but centering in the vicinity of Newport Beach and Dana Point. The remaining two areas are outlying and are represented by single lots, one released at Santa Cruz Island and one off San Diego in 1941-42, the only season in which all five areas are represented.

Tagging was very successful in the three major areas in 1940-41, 1941-42, and 1942-43. Prior to the 1940-41 season, only two successful lots were released, one at Santa Catalina Island in 1937-38 and the other in Santa Monica Bay in 1939-40. Each of the 19 lots gave returns in season one (the first season after tagging; the fishing season during which a lot was released is termed season zero) while eleven reappeared in the catch at least through season three.

That mackerel from the northern part of the range reach Southern California waters is attested by the recovery at a Los Angeles harbor cannery of a tag from one of the 11 fish released off Tillamook Head, Oregon, just south of the mouth of the Columbia River. This fish was marked in August, 1940, and recaptured in January, 1943. We are indebted to the Fisheries Research Board of Canada for permission to publish this record.

The magnitude of southerly movements is demonstrated most strikingly by returns from fish released in Central California where tagging was accomplished in five years, 1935, 1936, 1937, 1939, and 1941. There have been no recoveries from the 1935 group; this is attributed to imperfections later discovered in the opercular tags then in use. Returns from the remaining four years total 249, of which only 77 were recovered in Central California. There were 171 recoveries in Southern California an done at Ensenada, Mexico, the southernmost port at which there were facilities for tag recovery.

Internal tagging operations were concentrated in the fall months of 1937, 1939, and 1941. The bulk of the information available as to the movements of Central California stems from these three lots which differed in behavior among themselves but showed certain consistent tendencies.



In each case, Southern California returns far outnumbered those in Central California. The ratio of Southern California returns to Central California returns does, nonetheless, drop steadily from 5.7 to 1 for the 1937 lot to 3.5:1 for the 1939 lot to 2.5:1 for the 1941 lot. The explanation of this shift may lie in the decreased availability of sardines in the Central California area rather than in a change in the habits of mackerel. The number of sardine fishermen catching mixed loads increased in the later years; whether the mackerel population in Central California increased or remained fairly level is not known, but sardines were less available.

The percentage returned of total tagged is far less in both areas for the 1937 lot. A higher tagging mortality may account at least in part for the differences, as this lot represents the first large-scale application of internal tags.

Magnet recoveries by seasons in Southern California are also shown. All three lots appeared on the Southern California fishing grounds within a few months of release, the 1937 lot in far fewer numbers than the other two. Returns from this group were heaviest in seasons one and two and persisted through season five. The 1939 lot gave the highest returns in season one and did not reappear after season two. The 1941 lot appeared through season four and gave the greatest number of returns in season zero. In all cases, returns were scattered throughout the fishing season with no observable tendency of the fish to appear in greater numbers in any given month.

The recapture at Santa Cruz by a sportsman of a tagged mackerel released near Monterey some twenty miles to the south constitutes the only definite proof of a northerly movement on the part of these fish. The five recoveries at San Francisco canneries denote some northward movement, but cannot be regarded as positive evidence that the mackerel left the bay as the sardine fleet based at San Francisco sometimes operates within its limits. A study of the catch localities reported by the San Francisco fleet just prior to the recovery of these tags showed that two of the fish probably moved as far as Half Moon Bay, some sixty miles north of Monterey.

Recoveries in the San Francisco-Monterey area demonstrated a substantial northward movement on the part of fish released in Southern California. In all, 81 tags were recovered, 80 of them on cannery magnets. It is notable that all but one of the tags was recovered after the 1940-41 fishing season and that every season since 1941-42 is represented. This is partially a result of the small number of fish tagged in the earlier years, but the northern return per 1,000 released is far higher for those tagged since 1940. From 1936 through 1939, 5,109 fish were marked internally in Southern California and one was recovered in Central California. The remaining 80 returns are from the 34,184 fish released in 1940-43. As suggested in the preceding section the increased returns in recent seasons may be associated with a decrease in the availability of sardines rather than with an increased northern population of mackerel.

The single recovery prior to 1941 was of a fish released at Santa Catalina Island in the winter of 1937 and recaptured at Monterey in September, 1938. All of the returns since August, 1941,

(Continued on page 58)

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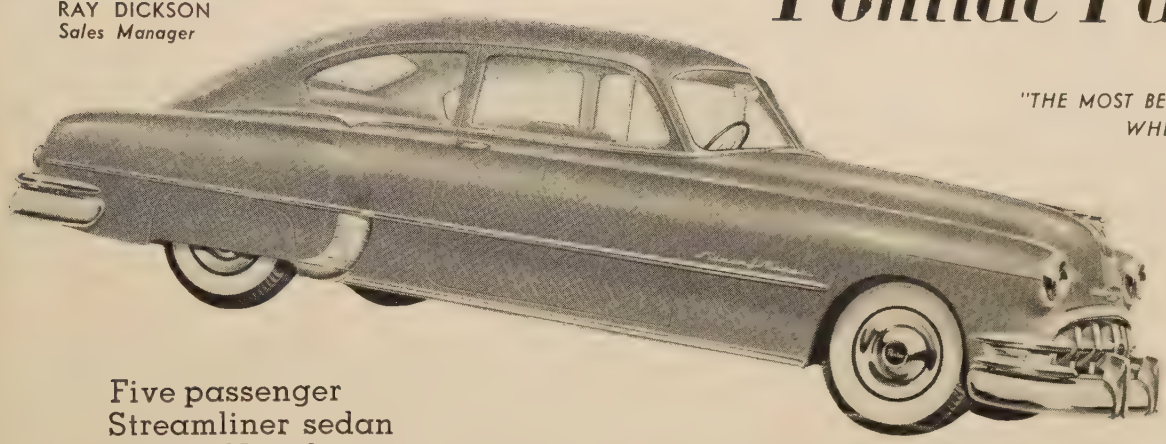

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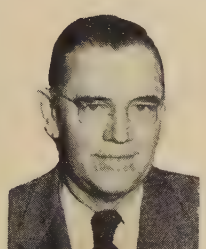
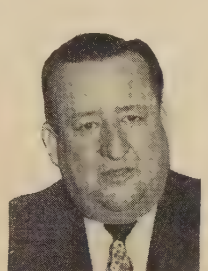


CARL PETERSON



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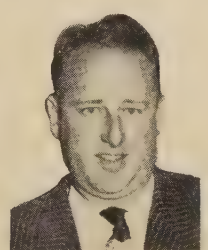

WIN TOBEY

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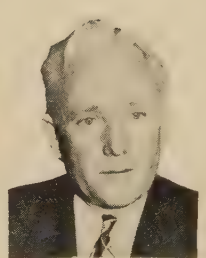
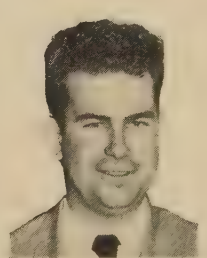


GENE KELLY



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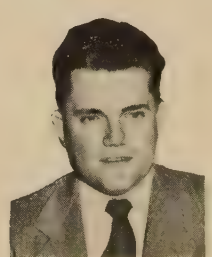

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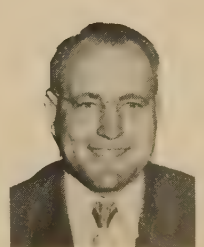

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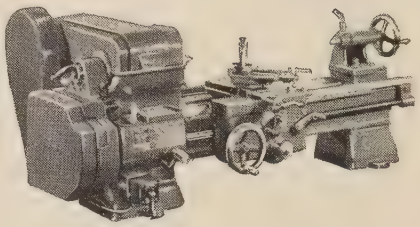

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The Sardine Investigation

Here is a progress report on the expanded program of investigations of the California sardine being carried on jointly by The Scripps Institution of Oceanography of the University of California, the California Division of Fish and Game, the United States Fish and Wildlife Service, and the California Academy of Sciences, covering the three-months' period ending July 31, 1949.

•

THREE additional sets of cruises were completed during the period. These covered the area from the Columbia River south to Cedros Island and to a distance of about 400 miles offshore, with the exception that during Cruise 4 most of the northern station pattern was omitted owing to a generator breakdown on one of the vessels.

Processed physical and chemical data for Cruises 1 and 2 have been completed and distributed within the Institution and for the information of other interested scientific personnel. The time of Cruises 1 and 2 was such that data from these cruises provided considerable information on the upwelling process. During Cruise 1 the winds off the coast of central California were variable, predominantly west and west-southwest at forces of from 7 to 12 knots. About eight days before Cruise 2 the winds shifted to the north-northwest and persisted for about two weeks at an average force of approximately 20 knots. It is believed that these strong, persistent winds brought about the upwelling indicated by a cooling of about 3° C in the Point Conception area at a time when warming might normally be expected. Throughout Cruises 2 and 3 the winds remained north-northwest and fairly strong, and temperatures in the region of upwelling remained constant while those in other areas rose about 2° C. Cooling was also noted in the region north of Cedros Island. The data for 1949 show that cooling in the upwelling areas began about a month earlier than usual and was abnormally intense.

A report has been prepared showing average monthly sea-surface isotherms for the West Coast of North America. Base charts showing temperature and salinity for four points along the California coast have been prepared, and these are being compared with cruise data.

Airplane wind observations are being supplied by the 308th Reconnaissance Group, and surface weather reports are being transmitted from the *Crest*, *Horizon*, and *Black Douglas* to the Weather Bureau. Captive balloon observations have been made on the *Crest* cruises in cooperation with the Department of Meteorology at U.C.L.A. and the Office of Naval Research. It is believed that to a large extent the ocean is the slave of the wind and that if an understanding of the dynamics of the atmosphere off the West Coast of North America is gained much will be learned about the regime of ocean currents and temperatures.

(Continued on page 60)

Confab

A group of Monterey, California's, retired sardine fishermen meet to talk over the latest in the current sardine investigations.

THE MACHADO TEST

(Continued from page 36)

helicopters. In turn, the control rotor is a simple aerodynamic device which controls the main rotor. The pilot actually flies the control rotor rather than the lifting blades. Self dampening action on the part of the control rotor corrects any oscillation of the helicopter and gives the ship inherent stability. This stable and simplified control system is an exclusive patented feature which distinguishes the Hiller 360 from all other helicopters.

The Hiller 360 not only has the greatest useful load to gross weight ratio of any helicopter today but also is the first all-metal, semi-monocoque helicopter to be put into commercial production. A few of the 'copters' outstanding features were:

(1) A single planetary transmission with but three planet gears.

(2) Completely automatic Mercury operated clutch, weighing only twelve pounds.

(3) Tension torsion rods in both tail and main rotor hubs materially decrease maintenance requirements over the usual main thrust bearings of other helicopters.

(4) Landing gear shock struts are air-oil operated, do not use metering pins and may be serviced at any service station.

(5) Flexible cell type fuel tank located on the center of gravity.

(7) All metal simplified tail rotor blades of full monocoque construction.

(8) Entire basic structure of all metal semi-monocoque construction.

(9) Cyclic control linkage through an overhead stick which goes directly from the pilot's hand to the transfer bearing, eliminating the usual floor stick installation.

(10) Combination throttle-total pitch lever which coordinates operation of the throttle with the total pitch. Two small handles, similar to the throttles of a twin engine airplane, allow the pilot to vary the cam action by finger tip control to accommodate for weight changes, atmospheric differences, etc.

(11) Special fore and aft trim system which permits effortless cross country operation. Even the foot pedals may be ignored except in landing and take-off. In cruising flight, turns are accomplished by simply moving the main control stick in the desired direction.

Further, with deliveries of the Hiller 360 helicopter now at the 3-ships-per-week mark, United Helicopters, Inc. has become the world's largest manufacturers of commercial rotary-wing aircraft. Stanley Hiller, Jr., president of the Palo Alto, California firm points out that, although a number of hand-built Government-approved demonstrator models were manufactured during 1948, the first commercial delivery was made only last February. Between that date and today, the corporation has stepped up production to its present day figure to become the production leader of the industry. United is the first organization formed solely for the manufacture of rotary-wing aircraft to achieve commercial production. This fact attributes directly to the company's ability to present the lowest priced helicopter on the market today.

AUGUST, 1949

United Helicopters, Inc. was formed in 1946 to carry on Hiller's previous helicopter activities. Over 4,000 Californians have sponsored the company's production engineering and manufacturing operations, making possible the rapid expansion to its present position. This immediate production goal has also been made possible by an unusual method of manufacturing, whereby approximately 92% of the Hiller 360 helicopter is produced by sub-contracting firms located mainly throughout the West. Over 125 persons are employed at United's Palo Alto assembly plant while approximately 400 persons are directly associated with the Hiller 360's production program in the various vendors' plants.

THE design of the Hiller 360 stems from a background of development almost unequalled in the rotary-wing world of today. Ten years of product, corporate and production "know how" played a major role in the successful completion of the final CAA approved model.

Operation

H. R. Watson, pilot of the 'copter, demonstrates the ease in which the craft can be landed on the canopy of a big clipper.

PRESS-O-GRAMS

(*Continued from page 35*)

Guests

Hap Holliday, interlocutor, *Voice of the Fisherman* radio program, interviews a young visitor aboard ship during the Kiwanis Kids Day program last month.

ago, and this page would like to congratulate the organization for being willing to work like hell in order to give a legislator something to sink his teeth into. That, of course, is the easiest way to get action in Congress, as there is no human in the world who can understand the individual problems of every industry in his district. Officers presiding at the meeting were John Kelly, President; Charles White, Secretary-Treasurer, and Varden F. Gregg, Vice-President. Guests included Clifford Pollock, Assistant Collector of Customs, San Diego; Hap Holliday, Interlocutor, Voice of the Fisherman radio program, and William Aukmoddy, Customs.

SHORT SHOTS

Shipyard Row has had quite a number of ships in for a face-lifting lately . . . among them are the *Virginia R.*, at Harbor Boat and Yacht, the *South Seas* and *Sea Hound* at Campbell's, the *Lusitania* at Martinolich's, the *Sun Victoria* and *Sun Queen* at National Steel. . . . Genine Marie Sousa, baby daughter of Frank and Florenda Sousa, was baptized at St. Agnes church last month . . . godfather and godmother were Manuel Sousa and Florence Neto. . . Frank has since departed on the *Mary S* for the fishing grounds. . . . John Humphphries, the *Courageous*' engineer, was flown home because of a skin condition. . . . Mr. and Mrs. Manuel Simas spent the holidays with relatives in Fresno, California. . . . Tony Madruga, Port Captain for Westgate, reported that the *Bernadette* was the first vessel to sail under the company's sixty, seventy-five, and ninety-day departures . . . the *Carol Virginia* was next, followed by the *Alpheca*, *Dorothy Lee*. . . . Harold Dempsey, President of San Diego Packing Company, entertained his son, Bud, and wife . . . the young couple is from San Francisco. . . . John Hahn, the *Scarlet Queen's* cook, was brought to port by Vic Goulart aboard the *Endeavor* . . . banged up arm. . . . Ed Morgan and Frank Marques, aboard the *Burlo Isle*, out of Victoria, B. C., Canada, were in San Diego during November. . . . Bob Tunison of the *N by W* has left Southern waters for the north. . . . Carl and Jack Medina got away on the *May Queen* . . . prior to their departure, Carl and Tillie, his wife, spent a week visiting Tillie's brother in Mountain View, California. . . . Manuel Madruga headed for the fishing banks, along with Manuel Monise and his *Ruthie B* . . . Madruga is skipper of the *Olympic*. . . . Bob King left port aboard the *Jimmie Boy*. . . . Sal Cresci and Frank Sabello were in port for Thanksgiving. . . Charlie Kaufmann, skipper of the giant clipper, *Scarlet Queen*, did it again . . . brought in the biggest load of fish ever to hit San Diego's port . . . load was so big he had to unload at San Pedro, California, because of the shallow waters adjacent to the High Seas docks . . . some people say Johnny Xitco, High Seas plant superintendent, is in the real estate business . . . Johnny has sold two homes within the past year, and is now considering the building of another.

Returned

M. O. Medina, distinguished pioneer of San Diego, California's fishing industry, who returned last month after trip abroad.

WELCOME HOME!

Mr. and Mrs. M. O. Medina, after an extensive trip abroad, arrived home. They arrived in San Pedro aboard the *Mor-Max*, and were greeted by a group of friends from San Diego, who drove up to welcome them back. On hand for the occasion were Dr. and Mrs. Amaral, Mr. and Mrs. Matt Olivera, Mr. and Mrs. Frank Machado, Mr. and Mrs. Joe Rogers, Mr. and Mrs. Joe Marques, Mr. and Mrs. George Goltz, Mrs. August Gerald, Mrs. Anthony De Sousa, and Mr. and Mrs. Warren Greenwood.

All Aboard!

The second-graders of Brooklyn Grade school, getting the "feel" of a tuna clipper. Mrs. Frank Aufdenspring, wife of a San Diego, California, contractor and sponsor of the trip, is shown at the extreme left.

MEXICO!

(*Continued from page 42*)

the most promising executives in Mexico. Ferreira, at that period, shipped shrimp to The Blumenthal Company of Los Angeles, brokers, and, at the same time, he operated a shark fishery in Guaymas, extending to La Paz and Mazatlan in the South, and to Rocky Point to the North. His laboratories and buying facilities lay at these points, too, and this firm now ships about fifteen carloads of shark livers annually. The name of this company is Cia. Vitaminica y de Extracciones, S. A.

FERREIRA'S association with General Rodriguez took place at the time when the latter was setting up his first shrimp freezing plants on the West Coast of Mexico for shrimp. The first, and largest one in the business, was directly under Ferreira's control. In 1947, he took over the Guaymas freezer plant and cannery, now known as Pesquera Industrializadora. Since that time the plant has developed by leaps and bounds, using its own brands for distribution into Eastern markets.

(Editor's note: In the next issue *Pan-American* will carry the balance of Mr. Ferreira's background and career, in addition to personality sketches of other top-flight Mexican fisheries leaders.)

Mexico-Bound

A group of Avondale of New Orleans trawlers, ready for Mexican duty. These vessels are sold through Drake and Bullen, San Diego, California, and, by virtue of their lines and sturdiness, have become a favorite type of craft with many Mexican fishermen.

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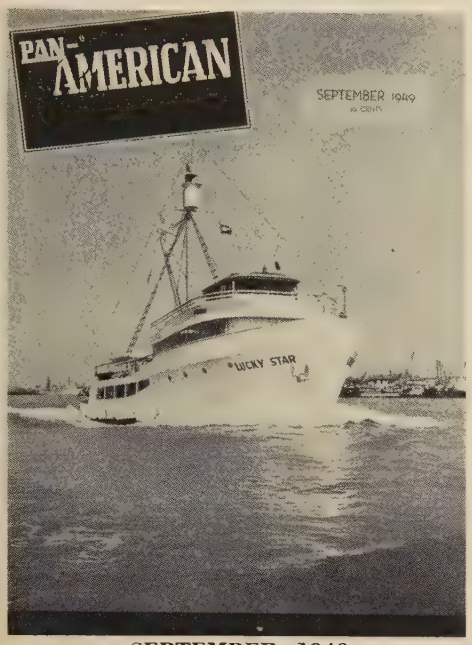

SEPTEMBER, 1949

(*Continued from page 39*)

a catch of 1800 tons. These were the *Bell of Portugal, Liberty Bell, Mayflower, Myrtle L., Gem of the Sea* and *Martin B.* The clippers *Julia B., St. Francis* and *Lusitania* returned from the banks off the coast of Mexico with big hauls of yellowfin and skipjack. Back from Guadalupe Island, the fishing boat *Poggy* brought in three tons of albacore, a ton of jewfish and several hundred pounds of barracuda.

CLUTCH OF THE DEEP

Rescue:

After a day on a sandbar near La Paz, 750 miles south of San Diego, the 130-foot schooner *Enchantress,* owned by William C. Ogle, Pasadena, was freed by the sea. There were 14 persons aboard, and Ogle had made radio contact with the Coast Guard Air Station at San Diego, for immediate assistance in the event of danger developing.

FISH, DOGS, HOLLYWOOD

Means to An End:

Skipper, one of Hollywood's movie dogs, demonstrated that while he liked the sea he had nothing but distaste for fish. In one scene Skipper, according to the script, was to wolf down a mackerel. However, he not only balked but emphasized his disdain for the piscatorial tid-bit by loud barking. But in the end Skipper was foxed. The property man fashioned a fake fish out of dried beef and attached plastic fins. This went down Skipper's hatch exactly as the script writer had pictured it on his typewriter.

BLOW TO AN INDUSTRY

Ross O. Leeper:

The fishing industry lost an important and loyal friend with the death of Ross O. Leeper, general manager of the San Diego, Calif., Harbor Boat & Yacht Company and former fleet manager of the San Diego Packing Company. A native of Thief River Falls, Minn., he selected San Diego for his home following discharge from the army after World War 1. At the outset he became associated with the fishing business and, at the time of his death, was widely known and highly respected by his fellow workers on both coasts. He was 51 and is survived by his widow, two daughters, mother, brother and two sisters, all California residents.

CONCLAVE

The APF:

E. M. Brennan, Seattle, Wash., was elected president of the Association of Pacific Fisheries at that organization's 36th asnual convention held at Coronado, Calfiornia. He succeeds A. W. Wittig, also from Seattle. Others who will serve with Brennan are: Vance F. Sutter, J. A. Green, E. W. Thompson and A. R. Barthold, vice presidents, and Dr. E. D. Clark, relected secretary-treasurer. Charles Carry, director of the Division of Fish Products of the National Canners Association, Wash., D.C., and Dr. Wilbur M. Chapman, special assistant to the Undersecretary of State for Fisheries, were two of many speakers at the convention session, including Harald Synnestvedt, President, National Fisheries Institute, and head of the far-flung New England Fish Company. Carr predicted that U. S. import tariffs on canned salmon and sardines will be reduced following a conference of 50 maritime nations, next summer. Dr. Chapman brought the government's thanks and praise to Pacific Coast fisheries for "100 per cent cooperation in framing the proposed Japanese peace treaty as it applies to fishing."

THE GOOD FIGHT

Smoke and Fire:

Thirty-four members of the crew battled desperately for hours to extinguish a fire which threatened to destroy their ship, the SS *Eagle,* Panamania. The *Eagle* was 360 miles west of Cape Flattery, Wash., in a heavy sea, when flames, starting in the engine room, raced through many parts of the stricken vessel. Lifeboats were lowered and everything was in readiness to abandon ship in the event teh crew was unsuccessful battling the blaze. Sticking doggedly to their dangerous task, however, they brought the fire under control, long before the U. S. Army Transport *General Freeman,* racing to her side, reached the *Eagle.* Under command of Capt. N. S. Ousondis, the merchantman was bound for Longview, Wash., from Fusan, Korea, the pick up general cargo for Vancouver, B. C.

RESTLESSNESS IN THE RANKS

The Gulf Coast Question:

Still disturbed by tie ups of the tuna fishing fleet during 1949, influential Southern California boat owners haven't abandoned the possibility of building a cannery on the Gulf Coast. Meanwhile, representatives of Louisiana and Mississippi port cities are hard at work in an effort to interest the boatowners in possible sites in their communities. As advantages, they point out lower rents, taxes, lower labor costs and the proximity to major eastern markets. On the other hand San Diego cannery operators are seeking means to prevent the conditions which resulted in growing restlessness by boat owners dealing with them. Under consideration is a plan to rotate the vessels' trips to sea and eliminate the simultaneous return to port of a major portion of the fleet with large hauls. *(Continued on page 54)*

Officer

Harald Synnestvedt, President, New England Fish Company, U.S.A., and President, National Fisheries Institute, Washington, D. C. A central figure in last month's Association of Pacific Fisheries 36th annual convention in Coronado, California.

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EDITORIAL

(*Continued from page 32*)

serving in a voluntary capacity with the mobile and portable units.

The 18 districts were further broken down into communities and blocks and a door-to-door campaign for each community was carried on, aimed at getting out all eligible persons for the X-raying. Dr. Oscar Kaplan of San Diego State College headed the survey's Statistical committee which made a cross section poll of prospective X-rayees before the X-raying began and will compile the statistics afforded by the survey at its termination. Prior to the start of the program speakers from District Five, Toastmasters International, headed by Howard Z. Dudley, chairman of the project's Speakers Bureau, appeared before local organizations to explain the purpose of the X-ray campaign.

Points of emphasis during the pre-survey campaign were the facts that the X-ray was free, confidential, quick and no undressing would be required. The X-ray procedure was explained as follows: When a person approached an X-ray unit he would first give his name, address and other pertinent information to a clerk there. After this he would be asked to step in front of the X-ray machine, take a deep breath and hold it for the few seconds required for the X-ray machine to take the "picture." It would be as simple as that—requiring no more time than it takes to pose for a photograph. As he left the unit he would be given a pin which he would be asked to wear for the duration of the campaign as a reminder to others that, "I've Been X-rayed. Have you?"

Each person X-rayed would be notified of his X-ray's result within two or three weeks of his visit to a unit. If there was any doubt about his X-ray or if it definitely showed an unsatisfactory chest condition, he would be notified and asked to report to survey headquarters at 4205 Pacific Highway where another, larger X-ray would be taken. In cases of tuberculosis thus discovered, the person would be called into consultation, then asked to contact a physician of his choice.

Aside from discovering cases of tuberculosis, health officials report the X-rays also will uncover other conditions of the chest such as heart or cancer disorders. This X-ray service has been extended to our neighbors to the south in Tijuana. Through newspapers, radio and personal contact they have been invited to avail themselves of a free X-ray when the units are in the neighboring communities of National City and Chula Vista.

Milady

By DOROTHY HARVEY

FRANCIS CABOT of New York's famous Fisheries Council reminds me that the lake herring season is upon us. During late October late herring congregate in Lake Michigan fishing grounds from whence they are scooped by eager fishermen and shipped to markets throughout the mid-west and east. As November matures, the run increases with Lake Superior contributing its share of the catch. The approach of winter makes the chill-sensitive herring depart for deep, warm water, out of the reach of fishermen's nets.

No relation at all to the sea herring, the lake herring is also called "blueback," "greenback," or just plain "herring." They are actually a member of the whitefish family, but on the small side. It takes three or four to make a pound. Lake herring appeal to consumers because of their reasonable price, excellent flavor and ease of cleaning and preparation. The flesh is lean, white, tender and flaky and may be used in many ways.

One of the most popular ways of preparing lake herring is frying in deep fat. Heat oil or fat in skillet, not allowing it to smoke. Fish may be left whole if desired. Dust with flour. Brown the herring for about five minutes. Serve hot with lemon slices, salt and pepper.

A cooking method recommended by the Fishery Council is:

Lake Herring Croquettes

1 cup fish, 1 cup baked or boiled potato, mashed (no skins), dash of nutmeg, 1 egg, fine bread crumbs.

Steam and flake fish into small pieces. Combine with potato, nutmeg and egg. Chill. Shape into croquettes or flat cakes. Roll in crumbs. Fry in deep fat or saute until brown.

•

Incidentally, here is some dope on lobster tails: Lobster tails in the local markets are an economical luxury dish. They are imported frozen into this country from Africa, Australia, Cuba, the Bahamas and Mexico. Only the tail section is sold, for the spiny or rock lobsters whose tails are used do not have claws.

The lobster tails look like they might have come from the famous Maine or Canadian lobster, but the flesh is not quite as tender, and the flavor is pleasing but different than regular lobster. Two main varieties of rock lobster tails are sold. If the shell is rough in texture, brownish red in color and is unspotted, the til comes from South Africa or Australia. If the shell is smooth, light brown in color and has four outstanding spots, the tail is from Bermuda, West Indies or our own southern coasts.

In serving, allow one tail weighing one-half to three-quarter pounds per person. To boil, immerse tails in boiling water which you have seasoned according to your individual taste. Boil tails in covered pot for 15 to 17 minutes. Split tails and serve with melted butter or margarine.

TO broil tails, split them down the underside and broil them in a preheated oven about four inches from the flame until they are well browned. This will take about fifteen minutes. Baste with melted butter or margine several times during broiling period.

Incidentally, what's for Christmas dinner in the way of food? I have a friend who claims she has set the stage on that date for Mexican barbecue lobsters. Seems her husband recently made a business trip to Guaymas, Mexico, and while there, he unearthed a recipe for this sort of barbecue. What it amounts to I can't tell you because at the moment she won't let out the dope. But I'm invited to the feed at any rate. And if I can get in a little spying I'll have the dope next month.

Terminal Tidings

By JERRY LEE PECHT

AN increase of storage area in Los Angeles harbor foreign trade zone, opened only last September 14th, will probably be requested of the foreign trade zones board in Washington, D. C. So, at least, I am told by the Los Angeles Board of Harbor Commissioners following their regular meeting at San Pedro branch city hall.

Arthur Eldridge, general manager, advised the board that heavy shipments of Mexican cotton had practically filled the zone and other shipments in storage included woodpulp, chinaware, furniture and miscellaneous goods. At present commodities in the zone total 7,500 tons, and additional space might be necessary to handle other products. He said that 4,000 bales of cotton en route here have to be diverted to other areas of the harbor because the zone at berth 60 could not handle this additional tonnage.

"In order for the harbor department to secure additional storage space in the zone," Eldridge advised the board, "it will be necessary for use to apply formally to the foreign trade zones board in Washington."

The commissioners also accepted the first bids for work on the $6,000,000 Matson terminal at berths 195-199. A high bid of $299,750 to construct 50 thousand feet of impregnated concrete piling was received from Walter C. Groshong, general contractor, at 4335 California Avenue, Long Beach, while a low bid of $263,650 was entered by Warren Southwest Incorporated of Los Angeles. Each bid covered a different process of manufacture. The bids were referred to the harbor engineering department for study and recommendation.

•

And here's some more dope that's been getting some talk hereabouts: Todd Shipyards Corporation, Los Angeles Division, has completed general repairs and the installation of a new main engine on the purse seiner *Sun Beam* for the Sun Harbor Packing Company of San Diego.

The *Sun Beam* was built in 1948 on the Pacific Coast. She is 101 feet overall in length, with a beam of 26½ feet, and 195 gross tons. The vessel has eight tanks with 150-ton maximum catch capacity. She can remain away from port with provisions for a crew of 12 persons and full fuel capacity with normal consumption for 40 days continuous running or 90 days intermittent running. Farthest she has traveled from her home port of San Diego is to the Galapagos Island. Equipped with an ammonia brine system for refrigeration, the *Sun Beam* also carries an echo sounder, a fathometer, ship-to shore radiotelephone, and direction finder.

The new engine, a four cycle, eight cylinder, 9½"x11", Nordberg Diesel, Model FMD98RSC, is the first marine installation of its type on the Pacific Coast. It is a fully enclosed heavy duty engine designed for operation at medium speeds, and by its compactness, the servicing and the operation of adjacent equipment is simplified. It is a supercharged model, employing the Elliott Buchi system of turbo charging and uses a reduction gear of the in-line planetary type which permits a lower installation of the engine.

The engine is started by compressed air and lube oil is supplied to the lubricating system by two oil pumps of the internal gear type driven from the crankshaft. In order to effect the engine installation, the complete house top, crew's berths, furniture, pipiny, electric wiring and a portion of the main deck planking were removed ashore, prior to lifting out the old engine. After removal of the old engine the existing engine foundation was modified with a full length steel base with fitted chocks and new fuel, fresh water and cooling pipe lines were installed to conform with the new engine requirements. After the new engine was set and aligned, all removals were replaced and painted as original.

EBB'N FLOW

(Continued from page 51)

ESCAPE

The Aztec:

Skipper William Self and three members of the crew of his 68-foot albacore boat, *Aztec II*, escaped injury, recently, when his ship crashed into the seaplane ramp of the Naval Air Station at San Diego, Calif. The *Aztec* sank but later was salvaged. Self reported he was putting out to sea when fog suddenly swept into the harbor reducing visibility to zero. Before he could bring his ship about it struck the submerged end of the ramp and almost immediately sank. With Self aboard were Henry Endly, Warren K., and John Simpson, all of San Diego.

DAMAGED PALACE

The Corsair:

What might have been a major sea disaster was averted by the absence of panic among passengers, crew and officers when the luxury liner *Corsair* went aground in Acapulco harbor, Mexico. The ship, commanded by Capt. H. Nedden, Vancouver, B. C., and operated by a Seattle, Wash. cruise company, was formerly the private yacht of the late international banker, J. P. Morgan. She carried 55 passengers and a crew of 77. Among the passengers were Lynn Spencer, Los Angeles Examiner society editor, who reported that the initial excitement, following the jar of the big ship against rocks, was almost instantly eliminated by the calm and efficient manner of officers and crew. Directed by Purser Ralph Mildram, his assistant, Charles Holt, and Chief Steward Jack Daley, the crew quickly got all passengers on deck, provided lifebelts and assigned them to boats. Meanwhile the sea was pouring through a large gap in the ship's side, flooding fuel tanks and extinguishing fires in the broilers.

Quick Action:

Realizing he couldn't return his 348-foot, 2699-ton vessel to her dock, Capt. Nedden beached the *Corsair* on Ensenada de Los Pedros, the "Bay of Prisoners." Shipping men agreed that but for the quick action of the skipper the *Corsair* would have sunk, she was taking in such great quantities of sea. The crash was attributed to a breakdown in the steering apparatus. Work of salvaging the luxury cruise ship was assigned to the tug Kanak of Los Angeles, commanded by Capt. Harry Peachy. The *Corsair* was built for Morgan in 1930 and turned over to the government for service during World War II. As a cruise ship she was to be operated out of Long Beach to ports in Mexico and South America.

(Continued on page 56)

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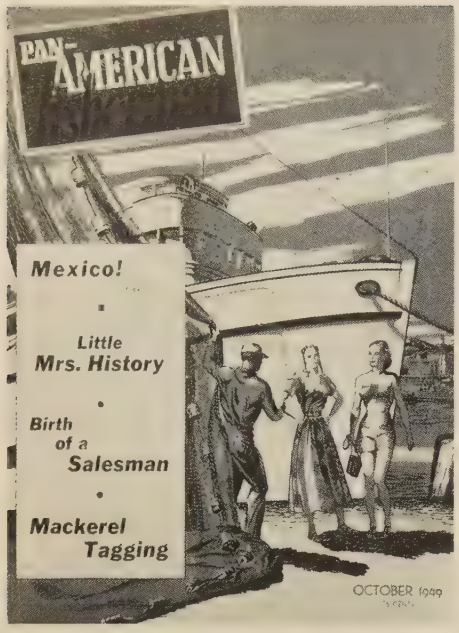
EBB'N FLOW

(Continued from page 54)



OCTOBER, 1949

EDUCATION

Clippers and Kids:

Chief feature of the San Diego, Calif. Kiwanis Club's 12-Hour Kid Day program was a trip aboard two tuna clippers. The youngsters assembled at the Broadway Pier long before dawn and then crowded aboard the *Mary Barbara* and the *Alphecca* for long trips in nearby waters. School authorities commended the clipper skippers for providing what they described as an educational as well as a recreational tour of San Diego harbor.

KICKBACK

Tax Levy:

By a ruling of the California Supreme Court in San Francisco, San Diego County was granted permission to keep $2486 tax money levied on 36 former small Navy craft purchased by the Power Equipment Company of New Jersey. The company originally paid the tax under protest. San Diego's Superior Court found in favor of the county and an appeal was taken by the New Jersey concern to the higher court. In its ruling the Supreme Court declared the craft were taxable because the levy was made before they had been put to commercial use.

NEW DEAL

Schedules:

The 50-boat fleet serving the Van Camp Sea Food Company out of San Diego, Calif. are now operating on a 60-day staggered schedule of sailings. Prior to the new schedule the fleet had been idle for nearly two months. Bates Harper, Van Camp executive, was credited with developing the stagger-plan to break the long lay-up.

THE MONTEREY SARDINE

Healthier Situation:

The Monterey, Calif., fishing fleet registered a haul of 100,019 tons of sardines for the 1949 season. In the latter part they switched operations from Monterey Bay where they found large numbers of anchovies mixed with the sardines, to San Simeon waters where they hit a number of good sized schools. Catches ran as high as 1500 tons. Meanwhile, after a short but spirited "price war," the market for canned sardines became "firm," with increases of 25 cents a case all across the board.

FINES

Tch, Tch:

Fines of from $10 to $25 were im-

(Continued on page 58)

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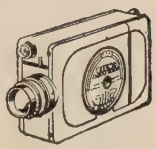
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EBB'N FLOW

(Continued from page 56)

posed in the San Diego, Calif., Municipal court on seven men and one woman for having undersized lobster and over-the-limit abalones. Those in the lobster cases were fined $25, while those who had more than the five-limit abalones were assessed $10.

INJURY BY EXPLOSION

Edward Adams:

Blasted into the sea by an explosion aboard a fishing boat launch, in Manzanillo Bay, Mexico, Edward Adams, 32, fisherman, was flown 1290 miles for hospitalization at San Diego by the Coast Guard. Adams was a member of the crew of the *West Coast*, out of San Diego. The Coast Guard ambulance plane was piloted by Lt. Comdr. C. A. Richmond, accompanied by Dr. Henry C. Savage of the U. S. Public Health Service.

COLLISION:

Nancy K. vs. Coastal Nomad:

Despite a crash, 35 miles south of San Diego, Calif., the fishing vessel *Nancy K.* and the motor vessel *Coastal Nomad*, were able to return to port without assistance from the Coast Guard. Inspection revealed that neither ship

(Continued on page 70)

MACKEREL TAGGING

(Continued from page 44)

are from the tag lots released since June, 1940. These recoveries are listed by season in Table 9 where they are compared with Southern California returns over the same period. They represent lots released in the Santa Monica Bay, Newport Beach, Santa Catalina Island, and San Diego areas. There have been no returns from the Santa Cruz Island area, the northern limit of the Los Angeles fishery, but only one lot of 500 fish was successfully tagged in that vicinity. No representatives of five other minor lots, two released at Santa Catalina Island and three in the Newport area, were recovered in Central California; a total of 3,229 fish are included in these six lots.

None of the tags was recovered in the season of release, but fish tagged between March and May, the period of scarcity in Southern California, appeared in the Monterey catch the following August. Two lots gave returns over four successive seasons.

Some measure of the magnitude of the movement north from Southern Californi may be obtained by comparing recoveries in Central California with returns over the same time internal in Southern California. The 79 magnet recoveries in Central California from August, 1941, to March, 1946, have a weighted value of 102.8. Weighted magnet returns from these same lots in Southern California exclusive of those recovered in the season of release total 1,760.8. There were, then, approximately seventeen Southern California returns for each Central California recovery in the seasons after tagging. This is a surprisingly low ratio in view of the huge Southern California catch, which is far more than seventeen times as great as the total mackerel tonnage *reported* delivered at Central California ports. Further, a large portion of this reported tonnage is sold through fresh fish markets with no opportunity for tag recovery. It is evident that the number of mackerel delivered to canneries mixed with sardines is quite appreciable.

In two years, fish were tagged at about the same time in both Central and Southern California. Returns in Central California in the seasons following release were relatively heavier for the locally tagged lots. One of the 3,918 fish released off Southern California in 1937-38 was recovered in Central California, but five of the 2,304 fish releas-

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ed at Monterey during the fall of 1937 were recaptured there after the 1937-38 season. There are no Southern California tag lots comparable with the 1939 Monterey lot, but of the 11,231 fish comprising the 1941-42 Southern California lots, eight were recovered in Central California while seven of the 1,082 Monterey-tagged fish were returned. It is possible that a portion of the fish tagged in Central California simply did not leave the area despite the large number of tags recovered in Southern California.

The relative number of recoveries in Central California from each Southern California lot appears to be positively associated with the number of returns in Southern California in the seasons after release. Several lots virtually disappeared from the Southern California catch after the season of tagging. Central California recoveries from these same lots were likewise few. Other lots giving high returns in Southern California gave similarly high returns in Central California. Lots with a low rate of return include all those released during the 1941-42 season and that released in the Newport area during June-August, 1940. The inference can be drawn that there was a southerly movement on the part of the fish in the lots giving poor returns, but the lack of facilities for tag recovery in Mexican waters prevents a positive check. These data do not indicate an abnormally high mortality as a result of tagging, for recoveries in season zero were comparable to those from lots giving high returns in the ensuing years.

Central California recoveries were scattered through the sardine season which extends from August to February. They reached a peak in the fall and dropped off abruptly in January. This was true of fish released in the summer and fall as well as of those released in the winter. Mackerel tag recoveries in general paralleled the sardine catch, falling off as the fishery diminished. Southern California recoveries from

these same lots occurred throughout the fishing season. Season one returns tended to be higher in the early part of the season for those lots marked during the summer and fall, and higher in the last half of the season for those marked during the winter. The trend was not pronounced and results were obscured by the time lag between capture of the fish and recovery of the tags. The few returns in later years were widely scattered. There is no evidence in the data of annual migrations of the fish along the coast, but the fact that a portion of the fish tagged in Southern California during the fishing season were in Central California waters in ensuing seasons coupled with the disappearance of some tag lots suggests that migration has an important bearing on dispersion and availability of the fish.

There were many recoveries in Southern California and one in Central California from the fish released at San Quintin Bay in January, 1940, and at Soledad Bay in October, 1941. Returns from the Soledad lot were particularly heavy when the small number of tagged fish is considered. This lot was unique among those released in Mexican waters in that there were several recoveries in Southern California during season zero. One tag was recovered less than a month from the date of release; this fish traveled at least 100 miles in that time. The 7.7 weighted returns in the season of release represent 16 per cent of the total number tagged, a surprisingly high percentage in view of the distance involved and the fact that the fishing season was past its peak when this group was marked. Returns persisted through season three (1944-45), this greatest number occurring in season one.

Recoveries from the San Quintin lot were most numerous in season one and appeared thereafter in steadily diminishing numbers through season five (1944-45).

(To be continued)

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SARDINE INVESTIGATION

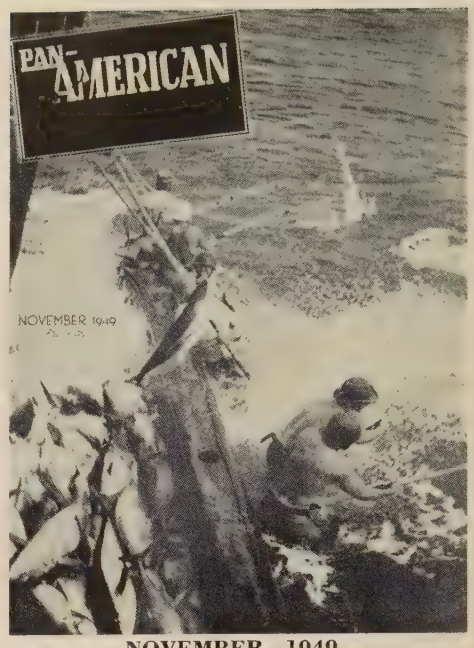
(Continued from page 47)

Chlorinity determinations have been completed for Cruises 1 to 4. The new four-ounce bottles have proved satisfactory and will be adopted for all cruises. Oxygen determinations are complete for five cruises, and phosphate data are available for those cruises on which difficulties were not encountered in the method. Use of the modified Lumetron colorimeter, a device to analyze samples colorimeterically for the determination of organic nutrients, has greatly increased the efficiency of phosphate determinations.

Copepods (minute relatives of shrimp) are usually overwhelmingly dominant in the plankton. They and the related euphausiids form the bulk of the "substantial" plankton organisms. Certain copepods are significant because of their abundance or of their characteristic geographical distribution. Additional hauls with finer-meshed nets are providing valuable information on the smaller copepods, and also on recruitment to the adult populations from studies of relative abundance of larvae. About eighteen species of seven genera of euphausiids have been encountered. Due to their charasteristic distributions some of these species may prove to be valuable indicators of the source of the water masses in which they occur. Studies of the distribution of sand-crab larvae have been started, since they give promise of indicating the progress and extent of offshore currents.

By means of chlorophyll (green coloring matter) determinations, the total phytoplankton (vegetable plankton) crop is estimated at depths ranging from 10 to 70 meters. A manuscript reviewing the general problem of phytopalnkton estimation is in preparation. Surface samples are also collected and preserved at each station for the purpose of identifying and enumerating the phytoplankton organisms present. The treatment of these samples in the laboratory by conventional methods is a very slow process, and a method has been developed by which the operation may be speeded up considerably. Development of much other new equipment is continuing, with emphasis on high-speed methods in the field and the laboratory.

Certain personnel from The Scripps Institution are assisting the South Pacific Investigations of the U. S. Fish ad Wildlife Service in carrying out studies of the sardine and other fish



NOVEMBER, 1949

eggs and larvae taken on the regular cruises. In addition, observations are being made on albatross, seal and other marine vertebrates.

THE activities of the South Pacific Fishery Investigations in the expanded sardine research program during the months of May, June and July may conveniently be considered in two

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sections; one dealing with the equipping and operations of the *F&WS Black Douglas*, and the other dealing with the egg and larvae studies. The *Black Douglas* was delivered to the Martinolich Ship Repair Company of San Francisco on May 9. Between this date and May 23, installation and conversion work required to make the *Black Douglas* suitable for use as an oceanographic and biological reesarch vessel was completed. This work included:

1. Installation of a special plankton hydrographic winch and rigging to handle 10,000 ft. of 1/4" stainless steel wire.

2. Installation of a 60 K.W. D.C. generating unit to supply the electric power required by the plankton-hydrographic winch and other ships needs.

3. Installation of a metal outboard work platform.

4. Installation of a hydrographic davit for handling the 1/4" wire.

Prior to entering the shipyard all of the major equipment had been ordered and received so that the time required in the shipyard was kept at a minimum. The construction of the laboratory and general rigging were handled by the crew and biologists assigned to the *Black Douglas*. This work was mainly completed before entering the shipyard.

The *Black Douglas* was ready for Cruise IV, her first cruise, on May 28, 1949. This cruise was started on May 31 with H. H. Eckles as Biologist in Charge. Due to poor weather conditions at the start of the cruise and electric power failures, it was not possible to complete Cruise IV, and the *Black Douglas* returned to San Francisco on June 9. A Cummins diesel engine, which powered an auxiliary generator, had suffered a serious casualty and it was too badly damaged to warrant repair. Consequently, a new Cummins diesel engine was obtained on an exchange basis and installed. The procurement and installation of this generating unit and other ships work required all of the time available between Cruises IV and V.

Cruise V began on June 30. Weather conditions on this cruise were generally good except for inshore stations. Thirty-nine stations were occupied, although it was necessary to omit the hydrographic casts on stations 403 and 302. Station 301 was omitted completely as weather conditions made work impossible. In addition, deep (2500-3000 meteers) bottle casts were made at four stations. Large volumes of plankton were obtained on all of the inshore stations. Many net tows contained approximately 2 gallons of plankton and one tow contained 3½ gallons. Almost

(Continued on page 64)

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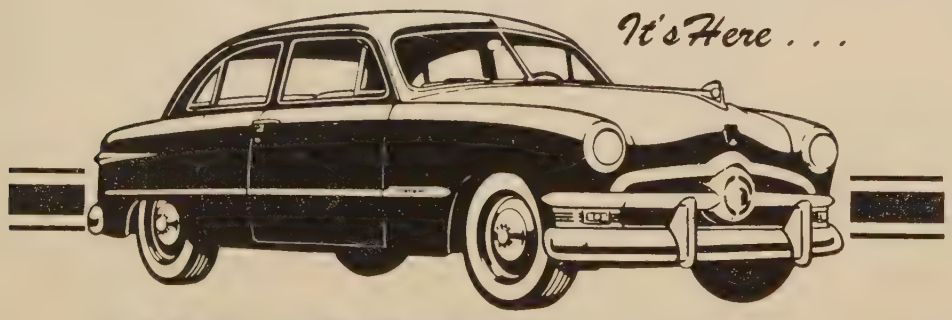

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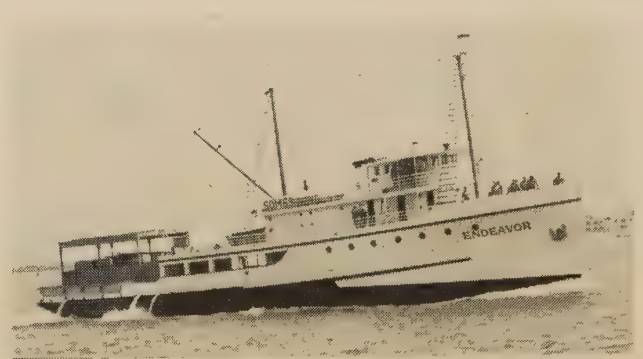

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SARDINE INVESTIGATION

(Continued from page 61)

all collections contained fish eggs and larvae. However, it will not be possible to determine the kinds taken until the collections are examined in the laboratory. Light-fishing activities were carried out at almost all night stations. Three species of fish were taken: the blue lantern fish (*Tarletonbeania crenularis*), the Pacific saury (*Cololabis saira*) and the sable fish or black cod (*Anoplopoma fimbria*). The sauries were most numerous and were seen in quite large schools at almost all stations. No schools of sardines were sighted.

An interesting by-product of this cruise was the discovery of an uncharted submarine peak about 240 miles west of the mouth of the Columbia River. This peak rises over 1300 fathoms from the ocean floor to within 480 fathoms of the surface.

The *Black Douglas* returned to San Francisco on July 18. The results of this cruise indicate that she is quite seaworyth and well suited for this type of work. When hove to on stations she has little tendency to drift, so that stations can be worked in relatively strong winds. Her worst feature is a fast roll, owing to the removal of top-side weight by the Navy. This should be corrected.

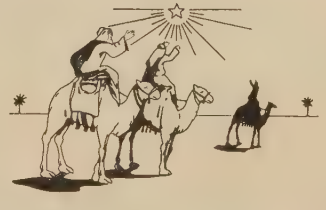
Prior to August 1, preparations were made for Cruise VI. This included the delivery of samples and data to the laboratory at Pt. Loma and obtaining scientific and general supplies necessary for this cruise. Minor repairs to the ship's radio, loran and fathometer were necessary.

Recruitment research is being carried out at Pt. Loma under the direction of Dr. E. H. Ahlstrom. It includes study of the fish eggs and larvae obtained by all ships operating in the program. There are employed at present two permanent and five temporary laboratory assistants. These assistants have completely sorted the plankton collections obtained on Cruises I and II and have completed the process for the four southern-most lines of Cruise III. As has been mentioned before, "hand sorting" of plankton is an exceedingly laborious and time consuming task. With an increase in efficiency of the present assistants and the employment of two more assistants, it is hoped that sorting can be maintained on a current basis.

DURING the first three cruises, March-May, sardine eggs were found, in general, first to the south and inshore. There was a tendency, during this period, for the numbers to increase and for the distribution to extend northward (to off southern California) and off-shore. Some eggs were taken over 300 miles off-shore. The same general remarks apply to the distribution and numbers of sardine larvae. In the course of removing sardine eggs and larvae from the plankton, all other fish eggs and larvae are also removed. Study of these other fishes is of direct importance to sardine studies, since the other fishes may be competitors for food and space, or, at some stage in their life, may feed on sardines. In this connection, interesting discoveries are continually being made. The distribution of anchovy (*Engraulis mordax*) larvae was seen to be roughly the same as that of sardine larvae. Hake (*Merluccius productus*) larvae have been found to be exceedingly abundant off central California. Jack mackerel (*Trachurus symmetricus*) larvae have been identified for the first time and have been found to be widespread off southern California and Lower California and occur as far off-shore as collections have been made.

(Continued on page 66)

Wishing You a Merry Christmas and a Happy New Year



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San Diego Observer

By SEYMOUR FRANCIS

ESTABLISHMENT of a General Fisheries Council for the Mediterranean, with headquarters in Rome, to promote cooperative action by governments in developing the seas' resources, seems to have got off to a good start, due to FAO member governments' enthusiasm following the Organization's Fifth Annual Conference, which was held in Washington, D. C. in late November. The Food and Agriculture Organization of the United Nations already has formed one such. This is the Indo-Pacific Fisheries Council, which with the same aims as those proposed for the Mediterranean, held its inaugural meeting in Singapore in March of this year. Its headquarters are in Bangkok, Thailand, site of the FAO Regional Office for Asia and the Far East. The long felt need for such cooperative effort among neighboring maritime nations for the investigation, development, and wise use of aquatic resources was recognized as early as the first Conference of FAO in 1945. The impetus toward actual establishment of fisheries councils, to serve appropriate geographic areas, comes from the 1947 FAO Conference, when it was recommended that such councils be formed "for the scientific exploration of the sea in parts of the world not now actively served by similar bodies." It was suggested that first consideration be given to the Northwestern Atlantic; Southwestern Pacific and Indian Ocean; Mediterranean Sea, and contiguous waters; Northwestern Pacific; Southwestern Pacific; Western South Atlantic; Eastern South Atlantic, and Indian Ocean. It was further suggested that the boundaries of these areas, and the constitution of the councils, be left to the determination of nations concerned.

In July, FAO Director-General N. E. Dodd issued invitations to governments concerned to meet in Rome in September to consider the formation of a council for the Mediterranean. Delegates from France, Greece, Italy, Lebanon, Turkey, United Kingdom and Yugoslavia, with observers from the United States, Spain, the Holy See, and the International Council for the Exploration of the Sea, attended the meeting and drew up an agreement for the establishment of a General Fisheries Council for the Mediterranean, the aims of which would be:

1. Development of aquatic resources.

2. Promotion of research and introduction of improved methods, with assistance to member governments.

3. Dissemination of information.

4. Standardization of equipment.

5. Study of fishery legislation of different countries.

6. Promotion of research into working conditions of fishermen.

7. To report annually on its activities to FAO and related agencies.

Each member government would be represented by one delegate with accompanying experts or advisers. The Council would elect a Chairman and two Vice-Chairmen, form committees, establish rules of procedure, and decide dates and locations of meetings. The initial meeting would be called by FAO within six months of the receipt by FAO of the fifth acceptance of the agreement, when the Council would enter into force. The Council would meet once a year, unless additional meetings were to be decided upon by the members of the Council. FAO would provide the Council secretariat. The seat of the Council would be the European Office of FAO, now in Rome. FAO would bear the cost of the secretariat, within the limits of its annual budget. Member governments would bear the expenses of research and development, whether undertaken by individual members of the Council or cooperatively. Acceptance of the agreement will be open to member governments of FAO, or to non-members who have the approval of the Council and of the FAO Conference, each of the latter to assume its proportionate share in the expenses of the Secretariat.

INVESTIGATION

(Continued from page 64)

In addition, valuable data are being gathered on fishes which are of great importance in the economy of the sea, although not of direct commercial importance. It is becoming increasingly self-evident that the biological, chemical and physical studies being carried out with immediate reference to the sardine problem will be of tremendous value to the study of many other fisheries.

At the beginning of May the *N. B. Scofield* was on her third cruise running the regular station line pattern of the oceanographic work. This cruise was completed successfully and the data and plankton collections turned over to The Scripps Institution and the U. S. Fish and Wildlife Service for analysis. Since the *Black Douglas* was then available for the oceanographic work, the *N. B. Scofield* was withdrawn from the sardine investigations. She spent the month of June off Eureka tagging salmon and conducting experiments to determine the amount of mortality resulting from the release of undersized salmon. During July she went into the yard for bottom painting, and the crew was given annual vacation.

In the latter part of July, the contract was let for the completion of the *Yellowfin*. Yard work should be completed and all necessary equipment was installed during August. She will be used to develop high speed methods for locating and identifying schools of sardines. In this work, a model WEA-2a echo ranging (sonar) equipment and experimental sounding gear will be used. If these experiments prove successful, the methods will be applied to the problem of measuring the abundance of sardines when four to twelve months old, and in determining the relationships between the availability of adult sardines and changing oceanographic conditions.

The routine collection of bait records in the southern California live bait fishery has been continued throughout the summer. No great abundance of sardines of the 1949 year class has been reported as yet.

Differences in feeding behavior of two sizes of sardines and anchovies when fed on brine shrimp have been observed. Sardines measuring about 75 mm. fed with a rising motion appearing to select individual shrimp. Anchovies of the same size and those measuring 200 mm. were not seen to rise or to select but to feed with a forward swimming and circling motion, snapping the

(Continued on page 71)

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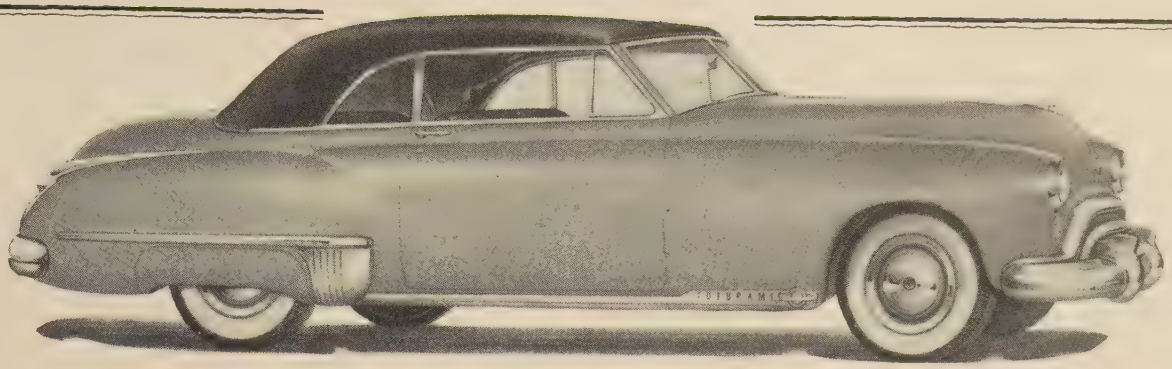

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BROADWAY at 15th

San Diego, Calif.

EBB'N FLOW

(Continued from page 58)
had suffered serious damage in the collision.

CONSTRUCTION

Rebuilding and Employment:

Plans have been completed to rebuild the San Diego Fish Market Building which suffered a $250,00 fire in November. In view of the fact that 100 persons were made idle by the blaze. the San Diego City Council directed the Harbor Commission to start the new construction immediately.

RESTORATION

Operation Squalicum:

Operation Squalicum, which may serve as a guide to restoration of salmon runs in the smaller streams of this state, was announced by the department of fisheries in Seattle, Washington. Director Alvin Anderson said that a field crew has been assigned to survey Squalicum creek and its tributaries lying on the outskirts of Bellingham. He said that the operation has been given high priority in the department's small stream management program because the watershed embraces so many of the factors that have adversely affected the salmon resource.

"Squalicum was once a heavy producer of silver and chum salmon, steelhead and native trout," he explained. "Through lowering of the water table, channel changes, pollution and silting, its fish population has been nearly destroyed."

The stream will be surveyed for diversions, obstructions, migration patterns, water temperature, flow gradient, watershed characteristics and type of bottom over its course of approximately 16 miles. The survey is also working toward the engineering of water retention areas to maintain stream flow.

"Like most other small streams," said Anderson, "Squalicum has been a victim of too much civilization. It has a critical coal pollution and siltation condition which is making the lower two miles impassable. One tributary, Baker creek, goes dry in the summer and the main stream itself is unable to support a salmon migration until December. Squalicum has changed but the fish haven't, and today the creek is a negligible contributor to our fisheries.

"This is the first time a comprehensive small stream study has been made, and I believe that it will furnish a basis of action for saving our salmon runs on streams of this type. Unless such a procedure is found, the state eventually must lose the major portion of its salmon fisheries."

THE FOREIGN FIELD

Panama:

Political upset in Panama has seen three men claim the presidency within a five-day period during late November, according to Harold F. Cary, General Manager, American Tunaboat Association, San Diego, California. Dr. Daniel Chanis, who assumed the office upon the resignation and subsequent death of Domingo Diaz Arosemena, was forced to resign on November 20, his successor, Roberto Chiari, was ousted in favor of Arnulfo Arias, who, at this writing, retains the office. Washington reports indicate an attitude of caution on the part of our government in making any decision as to recognition of the new government. All this affects the bait situation in Panama. The present closed season extends until January

Reporter

Harold F. Cary, General Manager, American Tunaboat Association, San Diego, California.

15 although it has been hoped that arrangements might be made for special permits before that time. The present political situation makes action impossible at this particular time.

Peru:

A news report from Peru, Cary said, illustrates how many world events have a direct effect upon the tuna industry. While devaluation of foreign currencies has had no direct bearing up to now, recent action in Peru can change the picture. The report reads in part: "On November 14 Peru revalued its currency through a government decree abolishing the official exchange rate for the sol of 6.5 to the dollar. At that official rate, the sol was worth approximately fifteen cents, but now with a free market prevailing the sol on November 14 was worth about five cents. . . . These action will aid the Peruvian fisheries industry in competing in the United States domestic market . . . "

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INVESTIGATION

(Continued from page 66)

mouth rapidly. Sardines of 200 mm. fed in the same manner as the anchovies except that the mouth was not snapped open and shut but was held open for about 1 to 2 seconds. Individual shrimp were not selected.

WHEN brine shrimp were poured into the holding tank the sardine school gave evidence of detecting the shrimp cloud from a distance of about 12 inches. To determine if a chemical sense in addition to sight is used in locating the food, an extract of brine shrimp filtered free of suspended matter was introduced into the aquarium in the same manner as the brine shrimp. The sardines behaved toward the colored solution as they had toward the shrimp cloud, responding to it from a distance of 12 inches. A solution of earth of the same color and density as the brine shrimp extract failed to elicit any response. It would thus seem to be indicated that a chemical sense plays a part in sardine feeding behavior.

Schooling observations were continued with the isolation of 10 sardines from the larger school for a period of 25 days, during which a school formation was maintained. At the end of this period fish of the small school were stained on the caudal fin and returned to the larger school. There was no evidence of the identity of the smaller school being maintained, as the stained fish intermingled at random with the fish of the larger school. All fish in this experiment were of approximately 75 mm. standard length.

Three sardines of approximately 200 mm. when placed in a school of 50 sardines averaging around 75 mm. moved with the school but did not appear to lead or govern the movements of the school. When the school was reduced to 10 of the smaller fish and three of the larger, the larger sardines led the school and appeared to determine movements of the entire school.

Since January of this year, studies have been carried on of the direction of circling of sardine schools under aquarium conditions. Information on the directional movements of large, undisturbed schools in bays and in open waters would be of considerable interest in this connection.

Aggregation studies have continued with additional data accumulated that show a definite increase in tendency to form close schools at water temperatures from 12°C. down to 6°C. and a reduction in this tendency at water temperatures from 12°C. up to 25°C.

Golden Gate

By ROBERT K. LAWSON

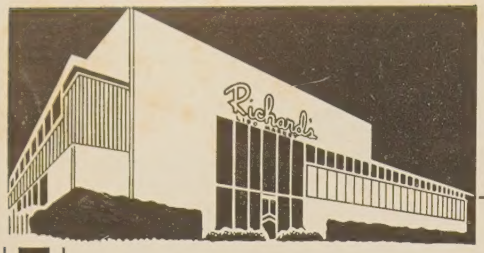
(Note: Robert K. Lawson is vacationing in San Diego, hence the local slant of his column this month.)

THE demoralizing fact that your beautiful new cabin cruiser has slipped to the bottom of the ocean will not dismay Glenn L. Orr a bit. In fact, Glenn may grin slightly if your agitation over this unseeming incident appears too great. And while you consider all that brass and mahogany and good engine down there in the mud, with all the natural horror of your esthetic being, Glenn will put in the clincher. "I'll drop down after work tonight and we'll raise her. Won't take half an hour."

It would be natural for you to immediately visualize derricks, big boats, elaborate pumping apparatus, and other strange phenomena characteristic of deep-sea operations, plus huge salvage sum frequently charged for such activities. But this is a one-man job; and all in a day's work (perhaps we should say evening's work) for Glenn Orr, of San Diego, California. Most of his equipment is handmade, including his boat which he built himself, in spare time from his regular job as machine operator for the Harbor Department of that City; and raising sunken boats, up to sixty feet or more in length, is strictly extra-curricular activity by individual preference for him. Because Glenn is an inveterate fisherman, his boat was primarily designed for that purpose. Being some thirty-five feet in length; diesel powered; and with accommodations for three or four individuals aboard. In addition to regular fishing gear, Glenn's boat carries curious equipment, never intended for the fishing clan, among which is a prodifious array of fifty gallon empty oil drums along the deck, vast coils of air hose, and a fairly large air compressor.

It will likely be getting dark by the time Glenn has finished his leisurely supper, and pulled his weird craft over the approximate spot where your boat rests, and dropped his anchor. There'll be a small searchlight to cast a erie glow over the proceedings; but since you can only guess what is going on under water, it is sufficient to light up the deck operations. Curiously enough there is an almost complete absence of diving equipment, and logically this might be considered one of the bare essentials anyway.

While you eye those fifty gallon drums, and generally stalk around wide-eyed, Glenn will pop into a pair of swimming trunks, strap on a rubber mask, with a glass window that covers most of his face, hop into a huge ungainly looking pair of rubber swim-fins. These gadgets on his feet help to propell him to the bottom and back to the surface. Pretty soon he slips over the side for the preliminary dive and investigation. After a long time (long enough for an ordinary man to drown, you'll think) he comes up and climbs back on the deck. He rips off the mask and starts nonchalantly pushing his fifty gallon drums into the water. They gurgle and fill with water and sink out of sight. If you noticed, however, they were all equipped with special hose clamp connections and special pressurized vent openings. As the drums sink, Glenn uncoils air hose, stout ropes, starts the air compressor, and rides the last drum to the bottom, carrying the hose and ropes with him. Two or three minutes slip by. You're there alone with the searchlight, and the plopping air compressor. About the time you think Glenn is a goner, take your eyes off the bubbles rising to the surface, and make a turn around the deck to relieve the tension. But watch! You'll feel movement under the water. Glenn's boat will heave and rock. The surface of the water ripples, and there is a tremendous heave; and your cruiser floats alongside, popping to the surface like a submarine. Like as not, Glenn will be standing on the deck of your boat. The oil drums are lashed to the railing all the way around your cruiser. The air hoses are attached to the drums, and air wheezes softly and, in moments, up she's topside again.



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